



# Full wwPDB EM Validation Report ⓘ

Jan 1, 2025 – 07:34 PM EST

PDB ID : 8ZJI  
EMDB ID : EMD-60146  
Title : Structure of DOCK5/ELMO1/Rac1 core (RhoG/DOCK5/ELMO1/Rac1 dataset, class 1)  
Authors : Kukimoto-Niino, M.; Katsura, K.; Ishizuka-Katsura, Y.; Mishima-Tsumagari, C.; Yonemochi, M.; Inoue, M.; Nakagawa, R.; Kaushik, R.; Zhang, K.Y.J.; Shirouzu, M.  
Deposited on : 2024-05-15  
Resolution : 4.23 Å (reported)  
Based on initial model : 7DPA

This is a Full wwPDB EM Validation Report for a publicly released PDB entry.

We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)

A user guide is available at

<https://www.wwpdb.org/validation/2017/EMValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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The following versions of software and data (see [references ⓘ](#)) were used in the production of this report:

EMDB validation analysis : 0.0.1.dev113  
MolProbity : 4.02b-467  
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)  
MapQ : 1.9.13  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.40

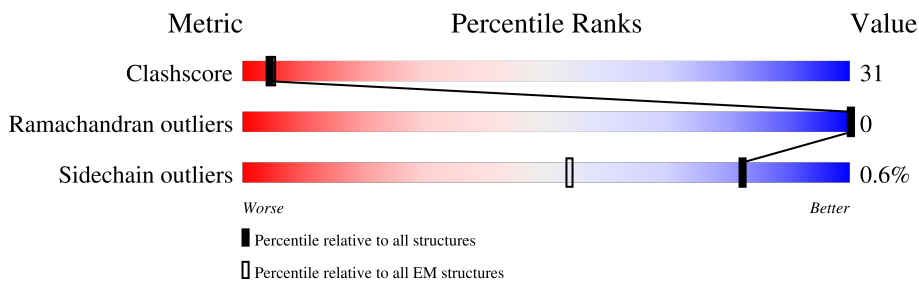
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*ELECTRON MICROSCOPY*

The reported resolution of this entry is 4.23 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	210492	15764
Ramachandran outliers	207382	16835
Sidechain outliers	206894	16415

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions  $\leq 5\%$ . The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion  $< 40\%$ ). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	733	
1	D	733	
2	B	1648	
2	E	1648	
3	C	184	
3	F	184	

## 2 Entry composition [i](#)

There are 3 unique types of molecules in this entry. The entry contains 32858 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a protein called Engulfment and cell motility protein 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	198	Total	C	N	O	S	0	0
			1608	1018	277	303	10		
1	D	198	Total	C	N	O	S	0	0
			1608	1018	277	303	10		

There are 12 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-5	GLY	-	expression tag	UNP Q92556
A	-4	GLY	-	expression tag	UNP Q92556
A	-3	SER	-	expression tag	UNP Q92556
A	-2	GLY	-	expression tag	UNP Q92556
A	-1	GLY	-	expression tag	UNP Q92556
A	0	SER	-	expression tag	UNP Q92556
D	-5	GLY	-	expression tag	UNP Q92556
D	-4	GLY	-	expression tag	UNP Q92556
D	-3	SER	-	expression tag	UNP Q92556
D	-2	GLY	-	expression tag	UNP Q92556
D	-1	GLY	-	expression tag	UNP Q92556
D	0	SER	-	expression tag	UNP Q92556

- Molecule 2 is a protein called Deducator of cytokinesis protein 5.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	B	1642	Total	C	N	O	S	0	0
			13436	8618	2264	2484	70		
2	E	1642	Total	C	N	O	S	0	0
			13436	8618	2264	2484	70		

There are 14 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B	-5	GLY	-	expression tag	UNP Q9H7D0

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Chain	Residue	Modelled	Actual	Comment	Reference
B	-4	GLY	-	expression tag	UNP Q9H7D0
B	-3	SER	-	expression tag	UNP Q9H7D0
B	-2	GLY	-	expression tag	UNP Q9H7D0
B	-1	GLY	-	expression tag	UNP Q9H7D0
B	0	SER	-	expression tag	UNP Q9H7D0
B	1285	ARG	LYS	variant	UNP Q9H7D0
E	-5	GLY	-	expression tag	UNP Q9H7D0
E	-4	GLY	-	expression tag	UNP Q9H7D0
E	-3	SER	-	expression tag	UNP Q9H7D0
E	-2	GLY	-	expression tag	UNP Q9H7D0
E	-1	GLY	-	expression tag	UNP Q9H7D0
E	0	SER	-	expression tag	UNP Q9H7D0
E	1285	ARG	LYS	variant	UNP Q9H7D0

- Molecule 3 is a protein called Ras-related C3 botulinum toxin substrate 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	C	177	1385	890	228	259	8	0	0
3	F	177	1385	890	228	259	8	0	0

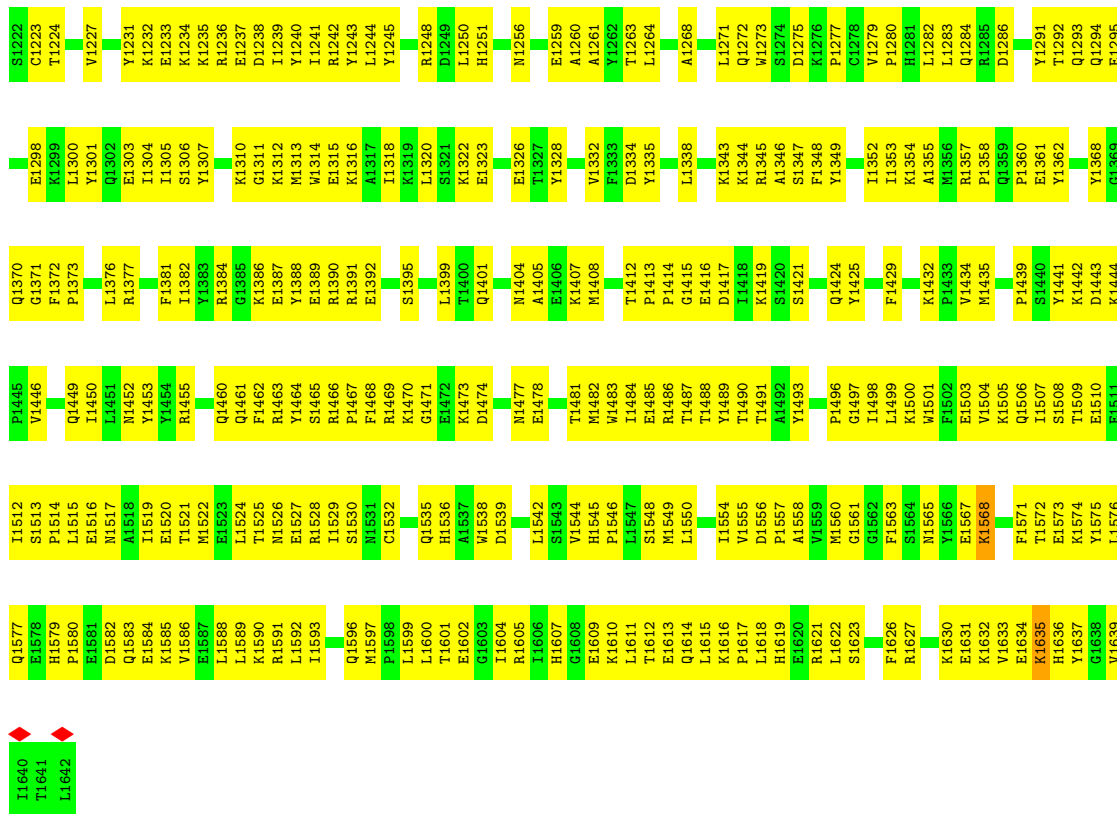
There are 16 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
C	-6	GLY	-	expression tag	UNP P63000
C	-5	SER	-	expression tag	UNP P63000
C	-4	SER	-	expression tag	UNP P63000
C	-3	GLY	-	expression tag	UNP P63000
C	-2	SER	-	expression tag	UNP P63000
C	-1	SER	-	expression tag	UNP P63000
C	0	GLY	-	expression tag	UNP P63000
C	15	ALA	GLY	engineered mutation	UNP P63000
F	-6	GLY	-	expression tag	UNP P63000
F	-5	SER	-	expression tag	UNP P63000
F	-4	SER	-	expression tag	UNP P63000
F	-3	GLY	-	expression tag	UNP P63000
F	-2	SER	-	expression tag	UNP P63000
F	-1	SER	-	expression tag	UNP P63000
F	0	GLY	-	expression tag	UNP P63000
F	15	ALA	GLY	engineered mutation	UNP P63000

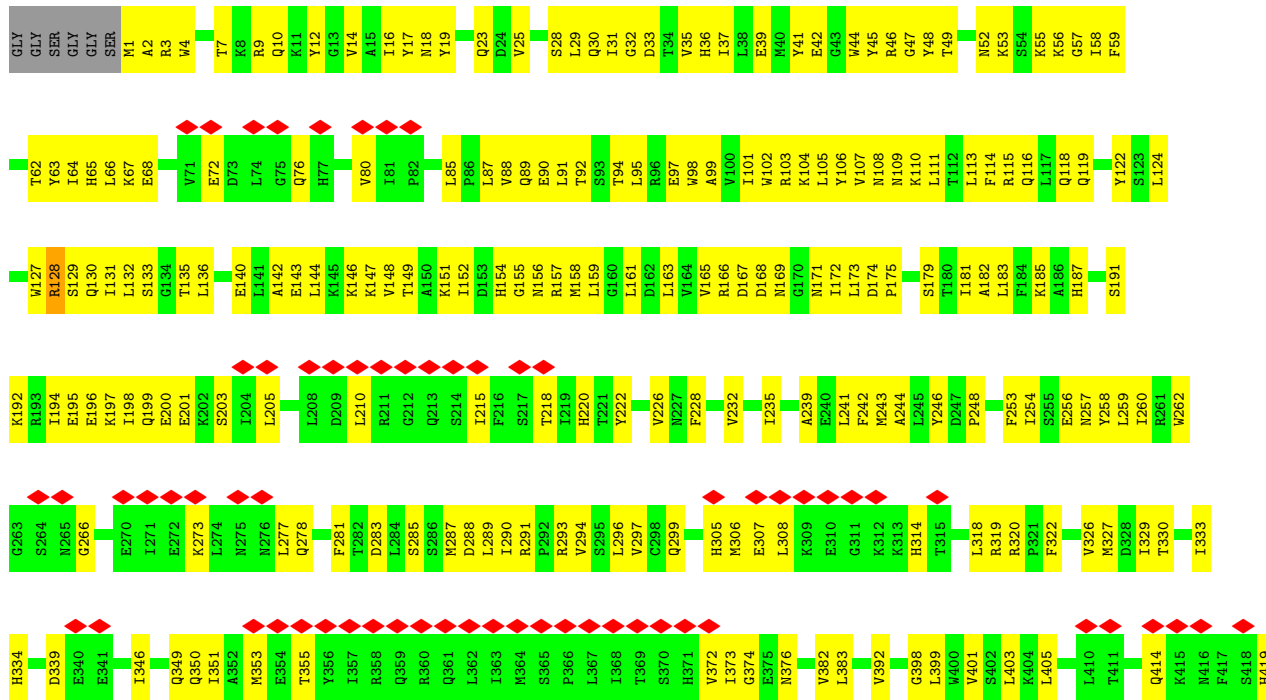




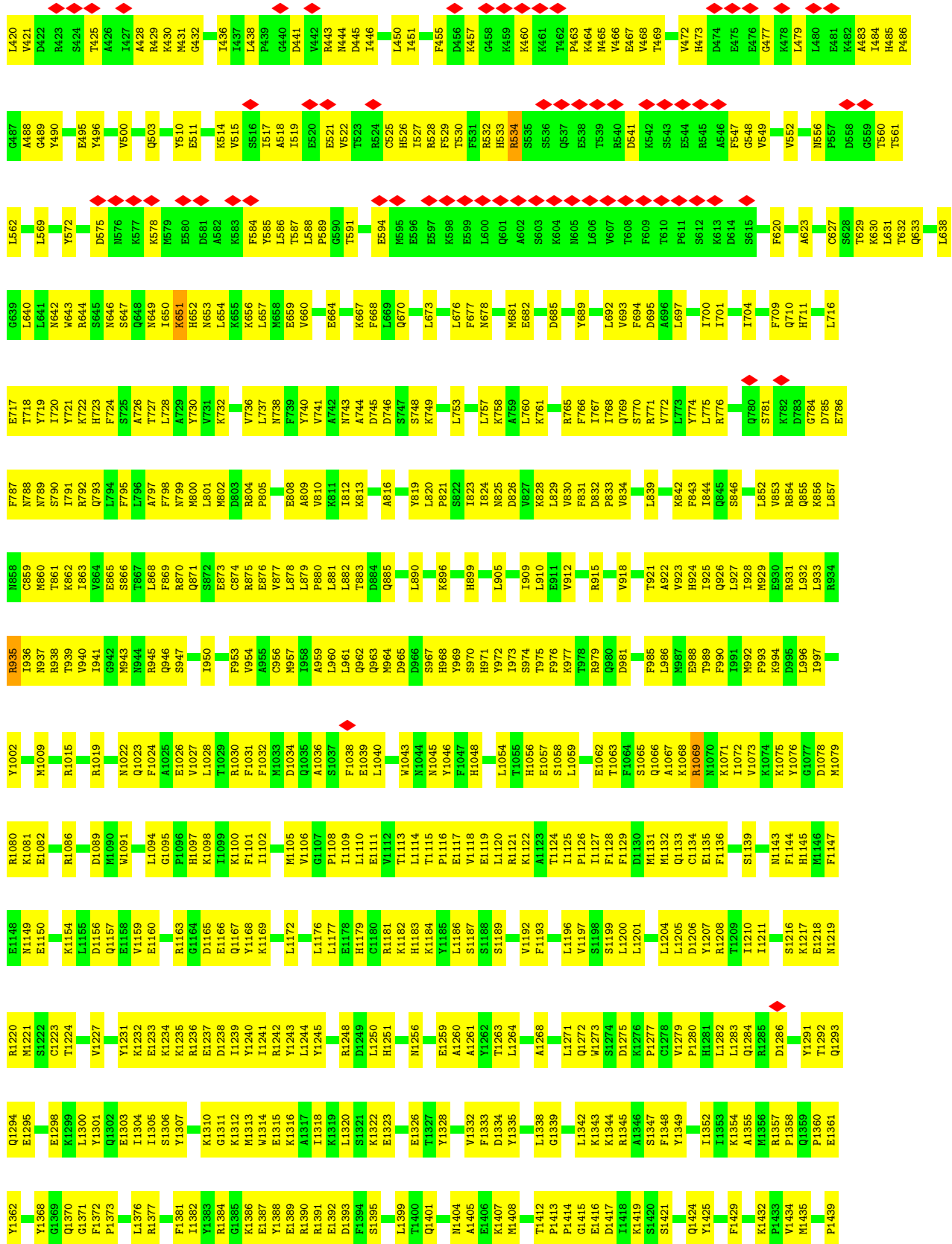
E1150	E1082	Y1002	L932	C859	E786	L716	L637	L569	A488	H419	T330	I260	K192
K1154	R1086	M1009	L933	M860	F787	E717	L638	Y572	G489	L420	I333	R261	R193
L1155	L1089	R1015	R934	T861	N788	T718	G639	Y672	Y490	L421	H334	W262	I194
D1156	D1089	R1015	R935	K862	S790	Y720	L640	D575	E495	D422	G335	W665	E196
Q1157	W1090	N937	R936	L863	T791	Y721	N642	N576	Y496	R423	G335	G266	K197
E1158	W1091	R938	R938	W864	R792	Y722	H643	N577	V500	S424	D339	G266	I198
V1159	L1094	Q1023	R939	E865	Q793	K722	R644	K577	V500	T425	E340	K269	Q199
E1160	G1095	F1024	Y940	S866	L794	H723	S645	K578	Q503	A426	E341	E270	E200
R1163	P1096	G1027	L794	T867	N646	F724	N647	N579	E511	I427	I346	I271	K201
D1165	H1097	V1027	S725	R646	A726	S647	S647	E580	Y510	A428	I346	E272	S203
E1166	K1098	L1028	R731	N649	R726	T727	R646	D581	E511	R429	I346	E272	L204
Q1167	I1099	T1029	W731	K651	A729	L728	K651	A582	K514	K430	Q349	K274	L205
K1169	I1102	R945	R731	H652	R731	L728	H652	E883	S515	M431	Q350	L274	L206
L1172	M1105	R950	K732	N653	W732	L728	L654	F584	S516	N275	I351	N275	L207
L1176	V1106	F953	K732	L654	K732	L728	L654	Y585	I517	N276	M353	N276	L208
L1177	G1107	R954	Y736	K655	W736	L737	K655	L586	A518	L277	M353	L277	D209
E1178	P1108	Y954	L737	K656	L737	R738	L657	L588	I519	L438	Q359	Q278	L210
H1179	I1109	C956	F739	N658	F739	N738	L657	P889	E520	P439	Y356	F281	R211
C1180	L1110	N957	Y740	E659	Y740	F739	E659	G590	E521	G440	I357	T282	Q212
R1181	W1111	L958	Y741	V660	Y741	K749	V660	T591	T523	V442	R358	L284	Q213
K1182	T1112	A959	K742	E664	K742	K749	E664	K592	T523	R443	R359	S285	S214
H1183	L1113	L960	N743	K667	N743	K749	K667	E594	R524	M444	Q360	S286	I215
L1184	T1114	L961	A744	F668	A744	D745	F668	E597	H826	L446	Q361	M287	F216
Y1185	P1115	Q962	D745	L669	D745	D745	L669	K598	I527	I446	I362	L288	S217
L1186	E1117	N964	K749	Q670	K749	K749	Q670	E599	R528	L450	I363	L289	T218
S1187	V1118	D965	L753	L673	L753	L753	L673	K599	F529	I451	M364	I290	I219
S1188	E1119	D966	L753	L673	L753	L753	L673	E599	T530	K461	R291	H220	H220
S1189	L1120	S967	L753	L673	L753	L753	L673	E599	F831	T462	R292	P292	H221
V1192	R1121	H968	L753	L673	L753	L753	L673	E599	R332	T462	R293	R293	Y222
F1193	K1122	Y969	L753	L673	L753	L753	L673	E599	H333	T462	R294	R294	Y222
L1196	A1123	H971	L753	L673	L753	L753	L673	E599	R334	T462	S365	S365	Y225
V1197	T1124	R972	L753	L673	L753	L753	L673	E599	Q601	T462	P366	P366	Y226
V1199	I1125	I973	L753	L673	L753	L753	L673	E599	H333	T462	L367	L367	V226
S1198	P1126	S974	L753	L673	L753	L753	L673	E599	R540	T462	K460	K460	H227
S1199	I1127	T975	L753	L673	L753	L753	L673	E599	D541	T462	V466	V466	H227
S1199	F1128	F976	L753	L673	L753	L753	L673	E599	K542	T462	C998	C998	F228
L1200	D1129	F976	L753	L673	L753	L753	L673	E599	S543	T462	Q299	Q299	F228
L1201	H1130	R979	L753	L673	L753	L753	L673	E599	E538	T462	H305	H305	V232
L1204	M1131	R979	L753	L673	L753	L753	L673	E599	T539	T462	M306	M306	I235
L1205	M1132	F985	L753	L673	L753	L753	L673	E599	R540	T462	E507	E507	I235
L1206	Q1133	L986	L753	L673	L753	L753	L673	E599	F609	T462	L308	L308	A239
D1206	C1134	R987	L753	L673	L753	L753	L673	E599	S543	T462	K309	K309	E240
Y1207	E1135	W987	L753	L673	L753	L753	L673	E599	E544	T462	L241	L241	L241
R1208	F1136	E988	L753	L673	L753	L753	L673	E599	R545	T462	F242	F242	L241
T1209	F1136	F988	L753	L673	L753	L753	L673	E599	A546	T462	M243	M243	L241
I1210	S1139	T989	L753	L673	L753	L753	L673	E599	F547	T462	A244	A244	L241
I1211	N1143	Y992	L753	L673	L753	L753	L673	E599	G548	T462	L245	L245	L241
S1216	F1144	N992	L753	L673	L753	L753	L673	E599	V549	T462	D247	D247	L241
K1217	H1145	Q926	L753	L673	L753	L753	L673	E599	V552	T462	P248	P248	L241
E1218	H1146	L928	L753	L673	L753	L753	L673	E599	N556	T462	D248	D248	L241
M1219	F1147	R929	L753	L673	L753	L753	L673	E599	P557	T462	Q250	Q250	L241
E1220	E1148	K856	L753	L673	L753	L753	L673	E599	D558	T462	F253	F253	L241
M1221	N1149	L857	L753	L673	L753	L753	L673	E599	G559	T462	I254	I254	L241



• Molecule 2: Dedicator of cytokinesis protein 5

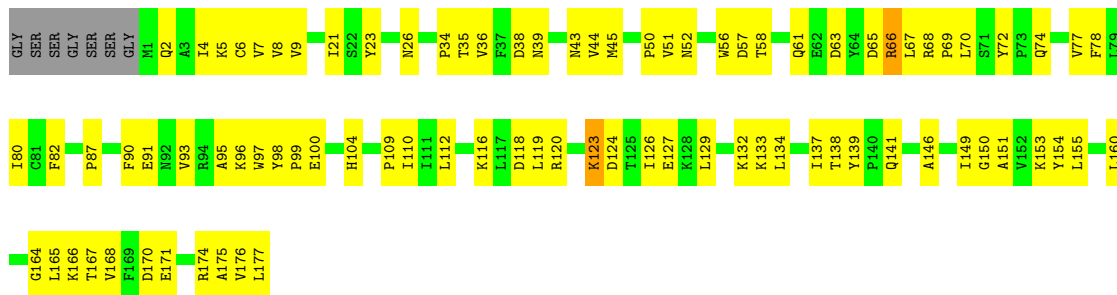








• Molecule 3: Ras-related C3 botulinum toxin substrate 1



• Molecule 3: Ras-related C3 botulinum toxin substrate 1



## 4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C2	Depositor
Number of particles used	133323	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ( $e^-/\text{\AA}^2$ )	50	Depositor
Minimum defocus (nm)	800	Depositor
Maximum defocus (nm)	2000	Depositor
Magnification	64000	Depositor
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	0.065	Depositor
Minimum map value	-0.020	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.002	Depositor
Recommended contour level	0.01	Depositor
Map size (Å)	452.2, 452.2, 452.2	wwPDB
Map dimensions	340, 340, 340	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.33, 1.33, 1.33	Depositor

## 5 Model quality

### 5.1 Standard geometry

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with  $|Z| > 5$  is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
1	A	0.29	0/1641	0.50	0/2218
1	D	0.29	0/1641	0.50	0/2218
2	B	0.32	0/13722	0.50	0/18514
2	E	0.32	0/13722	0.50	0/18514
3	C	0.32	0/1415	0.50	0/1924
3	F	0.32	0/1415	0.50	0/1924
All	All	0.32	0/33556	0.50	0/45312

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	1
1	D	0	1
All	All	0	2

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (2) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	541	GLN	Peptide
1	D	541	GLN	Peptide

### 5.2 Too-close contacts

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen

atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	1608	0	1617	101	0
1	D	1608	0	1617	107	0
2	B	13436	0	13516	857	0
2	E	13436	0	13516	860	0
3	C	1385	0	1407	80	0
3	F	1385	0	1407	87	0
All	All	32858	0	33080	2032	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 31.

All (2032) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1346:ALA:HB2	2:E:1342:LEU:HD11	1.27	1.09
1:A:536:LEU:HD21	2:B:17:TYR:HB2	1.40	1.03
1:A:697:ARG:HB3	2:B:31:ILE:HB	1.53	0.89
3:F:93:VAL:HA	3:F:97:TRP:HB2	1.59	0.85
2:E:144:LEU:HD13	2:E:147:LYS:HE2	1.60	0.83
3:C:93:VAL:HA	3:C:97:TRP:HB2	1.59	0.83
2:B:1335:TYR:HA	2:B:1338:LEU:HD23	1.61	0.83
1:D:535:GLU:O	1:D:539:LYS:HB3	1.79	0.82
2:E:883:THR:OG1	2:E:931:ARG:NH1	2.12	0.82
1:A:535:GLU:O	1:A:539:LYS:HB3	1.79	0.82
2:B:883:THR:OG1	2:B:931:ARG:NH1	2.12	0.82
2:E:166:ARG:NH1	2:E:167:ASP:OD1	2.12	0.81
2:B:166:ARG:NH1	2:B:167:ASP:OD1	2.12	0.81
2:B:802:MET:HA	2:B:813:LYS:HE3	1.62	0.81
2:B:1305:ILE:HD11	2:B:1320:LEU:HB2	1.62	0.81
2:B:1349:TYR:HB3	2:E:1335:TYR:HB3	1.61	0.81
2:E:681:MET:HE1	2:E:728:LEU:H	1.46	0.81
2:B:144:LEU:HD13	2:B:147:LYS:HE2	1.60	0.80
2:E:1335:TYR:HA	2:E:1338:LEU:HD23	1.61	0.80
2:E:1305:ILE:HD11	2:E:1320:LEU:HB2	1.62	0.80
2:E:1621:ARG:NH2	3:F:67:LEU:HD11	1.97	0.80
2:E:802:MET:HA	2:E:813:LYS:HE3	1.62	0.80
2:B:10:GLN:HG3	2:B:37:ILE:HB	1.65	0.79
2:B:681:MET:HE1	2:B:728:LEU:H	1.46	0.78
2:B:788:ASN:O	2:B:792:ARG:NH1	2.17	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:414:GLN:HE22	2:B:421:VAL:HG12	1.49	0.78
2:E:242:PHE:HB2	2:E:299:GLN:HB2	1.64	0.78
2:B:1328:TYR:HA	2:B:1332:VAL:HG12	1.66	0.78
1:A:563:ARG:HB3	1:A:573:LYS:HE3	1.65	0.77
1:D:670:ASN:ND2	1:D:676:ASP:O	2.16	0.77
1:A:670:ASN:ND2	1:A:676:ASP:O	2.16	0.77
2:B:242:PHE:HB2	2:B:299:GLN:HB2	1.65	0.77
2:E:197:LYS:HA	2:E:200:GLU:HG2	1.66	0.77
2:E:414:GLN:HE22	2:E:421:VAL:HG12	1.49	0.77
2:E:1393:ASP:OD1	3:F:166:LYS:NZ	2.17	0.77
2:B:968:HIS:HA	2:B:971:HIS:HD2	1.50	0.77
2:E:788:ASN:O	2:E:792:ARG:NH1	2.16	0.77
2:E:10:GLN:HG3	2:E:37:ILE:HB	1.65	0.77
1:D:563:ARG:HB3	1:D:573:LYS:HE3	1.65	0.77
2:E:241:LEU:HB2	2:E:260:ILE:HB	1.67	0.77
2:B:197:LYS:HA	2:B:200:GLU:HG2	1.67	0.77
2:B:445:ASP:HB2	2:B:627:CYS:HB2	1.66	0.76
2:B:278:GLN:HB2	2:B:425:THR:HG23	1.68	0.76
2:E:445:ASP:HB2	2:E:627:CYS:HB2	1.66	0.76
2:B:241:LEU:HB2	2:B:260:ILE:HB	1.67	0.76
3:C:23:TYR:HB2	3:C:165:LEU:HD21	1.64	0.76
3:F:23:TYR:HB2	3:F:165:LEU:HD21	1.65	0.76
2:E:968:HIS:HA	2:E:971:HIS:HD2	1.50	0.76
2:E:1328:TYR:HA	2:E:1332:VAL:HG12	1.66	0.76
2:B:4:TRP:HB3	2:B:39:GLU:HB3	1.68	0.76
2:E:921:THR:O	2:E:925:ILE:N	2.18	0.75
2:E:1473:LYS:HD3	2:E:1481:THR:HG21	1.68	0.75
2:B:1473:LYS:HD3	2:B:1481:THR:HG21	1.68	0.75
2:B:1579:HIS:HB3	2:B:1582:ASP:HB2	1.68	0.75
2:B:1346:ALA:CB	2:E:1342:LEU:HD11	2.14	0.75
2:B:1391:ARG:HD2	2:B:1429:PHE:HA	1.69	0.75
2:E:1388:TYR:OH	2:E:1390:ARG:NH1	2.20	0.75
2:B:925:ILE:HA	2:B:928:ILE:HD12	1.69	0.74
2:E:4:TRP:HB3	2:E:39:GLU:HB3	1.68	0.74
2:B:921:THR:O	2:B:925:ILE:N	2.18	0.74
2:B:1310:LYS:O	2:B:1312:LYS:NZ	2.18	0.74
3:C:146:ALA:O	3:C:150:GLY:N	2.20	0.74
2:E:874:CYS:HB2	2:E:878:LEU:HD13	1.68	0.74
2:E:1579:HIS:HB3	2:E:1582:ASP:HB2	1.68	0.74
2:B:874:CYS:HB2	2:B:878:LEU:HD13	1.68	0.74
3:F:146:ALA:O	3:F:150:GLY:N	2.20	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:278:GLN:HB2	2:E:425:THR:HG23	1.68	0.74
2:B:1056:HIS:ND1	2:B:1057:GLU:OE2	2.21	0.74
2:E:91:LEU:HD11	2:E:128:ARG:HG3	1.70	0.74
2:E:761:LYS:HE2	2:E:765:ARG:HH12	1.53	0.74
2:B:761:LYS:HE2	2:B:765:ARG:HH12	1.53	0.73
2:E:925:ILE:HA	2:E:928:ILE:HD12	1.69	0.73
2:E:1056:HIS:ND1	2:E:1057:GLU:OE2	2.21	0.73
2:E:1391:ARG:HD2	2:E:1429:PHE:HA	1.69	0.73
3:F:9:VAL:HG22	3:F:78:PHE:HZ	1.53	0.73
2:B:927:LEU:HB2	2:B:931:ARG:HH21	1.54	0.73
3:C:9:VAL:HG22	3:C:78:PHE:HZ	1.52	0.73
2:E:730:TYR:HB2	2:E:767:ILE:HG23	1.70	0.72
2:E:1260:ALA:O	2:E:1263:THR:OG1	2.07	0.72
2:E:927:LEU:HB2	2:E:931:ARG:HH21	1.54	0.72
3:C:171:GLU:HA	3:C:174:ARG:HG2	1.71	0.72
1:A:552:ARG:HH12	1:A:664:ILE:HG12	1.54	0.72
2:B:1388:TYR:OH	2:B:1390:ARG:NH1	2.20	0.72
2:E:472:VAL:HG21	2:E:483:ALA:HB3	1.71	0.72
2:B:91:LEU:HD11	2:B:128:ARG:HG3	1.70	0.72
2:B:1441:TYR:HE2	2:B:1450:ILE:HG21	1.54	0.72
2:E:1487:THR:HA	2:E:1509:THR:HA	1.69	0.72
2:B:49:THR:OG1	2:B:52:ASN:OD1	2.08	0.72
2:B:946:GLN:HA	2:B:950:ILE:HG21	1.72	0.72
2:B:1260:ALA:O	2:B:1263:THR:OG1	2.07	0.72
2:E:946:GLN:HA	2:E:950:ILE:HG21	1.72	0.72
2:E:1034:ASP:OD1	2:E:1097:HIS:NE2	2.22	0.72
2:B:730:TYR:HB2	2:B:767:ILE:HG23	1.70	0.72
1:D:550:GLN:O	1:D:554:ASN:ND2	2.23	0.72
2:B:472:VAL:HG21	2:B:483:ALA:HB3	1.71	0.71
2:B:749:LYS:HG2	2:B:753:LEU:HD23	1.71	0.71
2:B:825:ASN:OD1	2:B:826:ASP:N	2.23	0.71
2:E:1275:ASP:O	2:E:1292:THR:OG1	2.06	0.71
2:B:1399:LEU:HD22	2:B:1405:ALA:HB1	1.73	0.71
2:B:1487:THR:HA	2:B:1509:THR:HA	1.69	0.71
2:E:1259:GLU:N	2:E:1259:GLU:OE1	2.23	0.71
3:F:171:GLU:HA	3:F:174:ARG:HG2	1.71	0.71
1:A:589:GLY:HA3	1:A:604:LEU:HB2	1.72	0.71
2:B:95:LEU:HD21	2:B:124:LEU:HD22	1.72	0.71
2:B:1275:ASP:O	2:B:1292:THR:OG1	2.06	0.71
2:B:1284:GLN:HG2	2:B:1286:ASP:H	1.55	0.71
2:E:1441:TYR:HE2	2:E:1450:ILE:HG21	1.54	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:1284:GLN:HG2	2:E:1286:ASP:H	1.55	0.71
2:E:1575:TYR:O	2:E:1579:HIS:N	2.23	0.71
2:B:771:ARG:NH2	2:B:781:SER:OG	2.23	0.71
2:E:95:LEU:HD21	2:E:124:LEU:HD22	1.72	0.71
2:E:1399:LEU:HD22	2:E:1405:ALA:HB1	1.73	0.71
1:A:550:GLN:O	1:A:554:ASN:ND2	2.23	0.71
2:E:1245:TYR:HD2	2:E:1248:ARG:HH21	1.39	0.71
2:B:945:ARG:HH11	2:B:946:GLN:H	1.38	0.71
2:B:1386:LYS:HB3	2:B:1389:GLU:HG3	1.73	0.71
2:B:3:ARG:HH22	2:B:42:GLU:H	1.39	0.70
1:D:589:GLY:HA3	1:D:604:LEU:HB2	1.71	0.70
2:E:929:MET:HE1	2:E:968:HIS:O	1.91	0.70
2:E:1470:LYS:HB3	2:E:1483:TRP:CD1	2.27	0.70
2:E:244:ALA:HB2	2:E:257:ASN:HA	1.73	0.70
2:E:3:ARG:HH22	2:E:42:GLU:H	1.39	0.70
2:E:749:LYS:HG2	2:E:753:LEU:HD23	1.71	0.70
2:E:771:ARG:NH2	2:E:781:SER:OG	2.23	0.70
1:A:566:ASN:HA	1:A:568:ARG:HE	1.56	0.70
2:B:349:GLN:HB2	2:B:392:VAL:HG13	1.74	0.70
2:B:1177:LEU:HD22	2:B:1181:ARG:HH22	1.56	0.70
2:B:1470:LYS:HB3	2:B:1483:TRP:CD1	2.27	0.70
1:D:552:ARG:HH12	1:D:664:ILE:HG12	1.54	0.70
1:D:566:ASN:HA	1:D:568:ARG:HE	1.57	0.70
2:E:500:VAL:HG13	2:E:534:ARG:HH21	1.57	0.70
2:B:1015:ARG:HE	2:B:1076:TYR:HD1	1.40	0.70
1:D:711:PRO:HD2	2:E:17:TYR:HE1	1.57	0.70
2:E:945:ARG:HH11	2:E:946:GLN:H	1.38	0.70
2:E:444:ASN:ND2	2:E:517:ILE:O	2.25	0.69
2:E:1177:LEU:HD22	2:E:1181:ARG:HH22	1.56	0.69
2:B:1575:TYR:O	2:B:1579:HIS:N	2.23	0.69
2:E:772:VAL:HA	2:E:775:LEU:HD12	1.74	0.69
2:E:1360:PRO:HA	2:E:1387:GLU:HA	1.74	0.69
1:A:573:LYS:N	1:A:593:GLU:OE2	2.25	0.69
2:B:244:ALA:HB2	2:B:257:ASN:HA	1.73	0.69
2:B:518:ALA:HB3	2:B:521:GLU:HB2	1.74	0.69
2:B:1248:ARG:HG3	2:B:1264:LEU:HD11	1.73	0.69
2:B:1618:LEU:HD23	2:B:1621:ARG:HH21	1.56	0.69
1:D:573:LYS:N	1:D:593:GLU:OE2	2.25	0.69
2:E:349:GLN:HB2	2:E:392:VAL:HG13	1.74	0.69
2:B:444:ASN:ND2	2:B:517:ILE:O	2.25	0.69
2:B:857:LEU:O	2:B:861:THR:OG1	2.09	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:929:MET:HE1	2:B:968:HIS:O	1.91	0.69
2:B:1034:ASP:OD1	2:B:1097:HIS:NE2	2.22	0.69
2:E:518:ALA:HB3	2:E:521:GLU:HB2	1.74	0.69
2:E:825:ASN:OD1	2:E:826:ASP:N	2.23	0.69
2:E:49:THR:OG1	2:E:52:ASN:OD1	2.08	0.68
2:E:1248:ARG:HG3	2:E:1264:LEU:HD11	1.73	0.68
2:B:772:VAL:HA	2:B:775:LEU:HD12	1.74	0.68
2:B:1516:GLU:HA	2:B:1519:ILE:HD12	1.73	0.68
1:A:701:LEU:HA	1:A:704:ILE:HD12	1.75	0.68
2:B:695:ASP:OD1	2:B:740:TYR:OH	2.10	0.68
2:E:1386:LYS:HB3	2:E:1389:GLU:HG3	1.73	0.68
2:B:9:ARG:HD2	2:B:68:GLU:HG2	1.76	0.68
2:B:500:VAL:HG13	2:B:534:ARG:HH21	1.57	0.68
1:D:564:LYS:O	1:D:573:LYS:NZ	2.19	0.68
2:E:1439:PRO:HA	2:E:1442:LYS:HZ3	1.58	0.68
2:E:1516:GLU:HA	2:E:1519:ILE:HD12	1.73	0.68
2:B:1259:GLU:OE1	2:B:1259:GLU:N	2.23	0.68
2:E:1618:LEU:HD23	2:E:1621:ARG:HH21	1.56	0.68
3:F:61:GLN:O	3:F:68:ARG:NH2	2.26	0.68
2:B:1059:LEU:O	2:B:1063:THR:OG1	2.11	0.68
3:C:170:ASP:HB3	3:C:174:ARG:HH21	1.59	0.68
2:E:695:ASP:OD1	2:E:740:TYR:OH	2.10	0.68
2:E:1310:LYS:O	2:E:1312:LYS:NZ	2.18	0.68
2:B:879:LEU:HD12	2:B:882:LEU:HB2	1.76	0.68
2:B:1245:TYR:HD2	2:B:1248:ARG:HH21	1.39	0.68
2:E:945:ARG:NH1	2:E:946:GLN:OE1	2.27	0.68
2:B:945:ARG:NH1	2:B:946:GLN:OE1	2.27	0.68
2:B:1154:LYS:HD2	2:B:1157:GLN:HE22	1.59	0.68
2:E:1154:LYS:HD2	2:E:1157:GLN:HE22	1.59	0.68
3:C:61:GLN:O	3:C:68:ARG:NH2	2.26	0.68
2:E:879:LEU:HD12	2:E:882:LEU:HB2	1.76	0.68
2:B:129:SER:HA	2:B:132:LEU:HD12	1.76	0.67
1:D:536:LEU:HD23	2:E:31:ILE:HD11	1.76	0.67
2:E:1218:GLU:OE1	2:E:1218:GLU:N	2.27	0.67
2:B:19:TYR:HB2	2:B:59:PHE:HE1	1.59	0.67
2:B:834:VAL:HB	2:B:873:GLU:HG2	1.77	0.67
2:B:1392:GLU:HB2	3:C:166:LYS:NZ	2.09	0.67
2:E:129:SER:HA	2:E:132:LEU:HD12	1.76	0.67
1:D:701:LEU:HA	1:D:704:ILE:HD12	1.75	0.67
2:E:730:TYR:HB3	2:E:770:SER:HB3	1.75	0.67
2:E:1015:ARG:HE	2:E:1076:TYR:HD1	1.40	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:351:ILE:HG12	2:B:382:VAL:HG21	1.77	0.67
2:B:1143:ASN:OD1	2:B:1145:HIS:ND1	2.28	0.67
2:B:1115:THR:O	2:B:1121:ARG:NH2	2.28	0.67
2:B:1360:PRO:HA	2:B:1387:GLU:HA	1.74	0.67
2:E:853:VAL:HG23	2:E:854:ARG:HD3	1.76	0.67
2:B:90:GLU:O	2:B:94:THR:HG23	1.95	0.67
2:B:561:THR:HG21	2:B:631:LEU:HB3	1.76	0.67
2:B:730:TYR:HB3	2:B:770:SER:HB3	1.75	0.67
1:D:723:VAL:HG23	2:E:2:ALA:HB1	1.77	0.67
2:E:561:THR:HG21	2:E:631:LEU:HB3	1.76	0.67
2:B:1346:ALA:HB2	2:E:1342:LEU:CD1	2.17	0.67
2:B:1439:PRO:HA	2:B:1442:LYS:HZ3	1.59	0.67
2:B:1573:GLU:O	2:B:1577:GLN:NE2	2.28	0.67
2:E:19:TYR:HB2	2:E:59:PHE:HE1	1.59	0.67
2:E:1143:ASN:OD1	2:E:1145:HIS:ND1	2.28	0.67
2:E:94:THR:HG21	2:E:152:ILE:HD11	1.77	0.67
2:E:932:LEU:N	2:E:935:ARG:HH21	1.93	0.67
2:E:1573:GLU:O	2:E:1577:GLN:NE2	2.28	0.66
2:B:1114:LEU:O	2:B:1163:ARG:NH1	2.29	0.66
2:E:1233:GLU:O	2:E:1235:LYS:NZ	2.28	0.66
2:E:1462:PHE:HB2	2:E:1489:TYR:HB2	1.77	0.66
2:E:1486:ARG:O	2:E:1510:GLU:N	2.28	0.66
2:B:1414:PRO:HB2	2:B:1419:LYS:HD3	1.78	0.66
1:D:536:LEU:HD21	2:E:17:TYR:HB2	1.77	0.66
2:B:1059:LEU:HD12	2:B:1116:PRO:HB2	1.78	0.66
2:B:1486:ARG:O	2:B:1510:GLU:N	2.28	0.66
2:B:94:THR:HG21	2:B:152:ILE:HD11	1.77	0.66
2:B:1357:ARG:HH21	2:B:1453:TYR:HD1	1.44	0.66
2:E:103:ARG:HA	2:E:106:TYR:HE1	1.61	0.66
3:F:170:ASP:HB3	3:F:174:ARG:HH21	1.59	0.66
2:B:932:LEU:N	2:B:935:ARG:HH21	1.93	0.65
2:E:90:GLU:O	2:E:94:THR:HG23	1.95	0.65
2:E:834:VAL:HB	2:E:873:GLU:HG2	1.77	0.65
2:E:857:LEU:O	2:E:861:THR:OG1	2.09	0.65
2:E:1357:ARG:HH21	2:E:1453:TYR:HD1	1.44	0.65
2:E:9:ARG:HD2	2:E:68:GLU:HG2	1.76	0.65
2:E:1114:LEU:O	2:E:1163:ARG:NH1	2.29	0.65
2:B:1233:GLU:O	2:B:1235:LYS:NZ	2.28	0.65
2:E:46:ARG:HB3	2:E:58:ILE:HG13	1.79	0.65
2:E:939:THR:O	2:E:943:MET:N	2.17	0.65
2:E:1059:LEU:HD12	2:E:1116:PRO:HB2	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:853:VAL:HG23	2:B:854:ARG:HD3	1.76	0.65
2:E:351:ILE:HG12	2:E:382:VAL:HG21	1.77	0.65
2:B:1277:PRO:HG3	2:B:1292:THR:HA	1.77	0.65
2:B:465:ASN:ND2	2:B:534:ARG:O	2.25	0.65
2:B:979:ARG:NH1	2:B:1031:PHE:O	2.30	0.65
2:B:1462:PHE:HB2	2:B:1489:TYR:HB2	1.77	0.65
2:E:1602:GLU:HG3	2:E:1605:ARG:CZ	2.27	0.65
2:B:1602:GLU:HG3	2:B:1605:ARG:CZ	2.27	0.65
2:E:191:SER:HA	2:E:194:ILE:HD12	1.79	0.65
2:E:843:PHE:O	2:E:846:SER:OG	2.10	0.65
2:E:1059:LEU:O	2:E:1063:THR:OG1	2.11	0.65
2:E:1115:THR:O	2:E:1121:ARG:NH2	2.28	0.65
2:B:1353:ILE:HG23	2:E:1335:TYR:CD2	2.32	0.64
2:E:1277:PRO:HG3	2:E:1292:THR:HA	1.77	0.64
3:C:87:PRO:HA	3:C:90:PHE:CD2	2.32	0.64
2:B:1218:GLU:OE1	2:B:1218:GLU:N	2.27	0.64
2:B:1372:PHE:O	2:B:1377:ARG:NH2	2.28	0.64
2:B:1596:GLN:HE21	2:B:1600:LEU:HD21	1.61	0.64
2:E:1414:PRO:HB2	2:E:1419:LYS:HD3	1.78	0.64
2:E:1091:TRP:HA	2:E:1094:LEU:HD13	1.79	0.64
2:E:979:ARG:NH1	2:E:1031:PHE:O	2.30	0.64
2:E:1596:GLN:HE21	2:E:1600:LEU:HD21	1.61	0.64
3:F:77:VAL:HG12	3:F:109:PRO:HG2	1.80	0.64
2:B:970:SER:O	2:B:974:SER:OG	2.13	0.64
2:E:970:SER:O	2:E:974:SER:OG	2.13	0.64
2:B:1284:GLN:HE21	2:B:1286:ASP:HB2	1.63	0.64
2:B:1091:TRP:HA	2:B:1094:LEU:HD13	1.79	0.64
2:E:730:TYR:OH	2:E:771:ARG:NH1	2.31	0.64
2:E:785:ASP:OD1	2:E:786:GLU:N	2.31	0.64
2:B:191:SER:HA	2:B:194:ILE:HD12	1.79	0.63
2:B:730:TYR:OH	2:B:771:ARG:NH1	2.31	0.63
2:E:1391:ARG:NH2	3:F:29:PRO:HD3	2.13	0.63
2:E:23:GLN:HG2	2:E:58:ILE:HB	1.79	0.63
2:B:201:GLU:O	2:B:205:LEU:HB3	1.99	0.63
2:B:857:LEU:HA	2:B:860:MET:SD	2.38	0.63
2:B:1117:GLU:OE2	2:B:1121:ARG:N	2.26	0.63
3:C:129:LEU:HA	3:C:132:LYS:HG2	1.79	0.63
2:E:465:ASN:ND2	2:E:534:ARG:O	2.25	0.63
3:F:129:LEU:HA	3:F:132:LYS:HG2	1.79	0.63
2:E:465:ASN:O	2:E:534:ARG:NH1	2.31	0.63
2:E:857:LEU:HA	2:E:860:MET:SD	2.38	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:1623:SER:HB3	2:E:1627:ARG:HH12	1.64	0.63
2:E:1372:PHE:O	2:E:1377:ARG:NH2	2.28	0.63
2:B:103:ARG:HA	2:B:106:TYR:HE1	1.61	0.63
2:B:465:ASN:O	2:B:534:ARG:NH1	2.31	0.63
2:B:485:HIS:HB2	2:B:514:LYS:HB3	1.81	0.63
2:E:556:ASN:N	2:E:560:THR:O	2.32	0.63
3:F:44:VAL:N	3:F:51:VAL:O	2.27	0.63
2:B:46:ARG:HB3	2:B:58:ILE:HG13	1.78	0.63
2:B:87:LEU:HD23	2:B:91:LEU:HD23	1.81	0.63
2:E:1062:GLU:OE2	2:E:1080:ARG:NH1	2.32	0.63
3:F:87:PRO:HA	3:F:90:PHE:CD2	2.32	0.63
2:B:23:GLN:HG2	2:B:58:ILE:HB	1.79	0.63
2:B:785:ASP:OD1	2:B:786:GLU:N	2.31	0.63
2:E:127:TRP:HD1	2:E:130:GLN:NE2	1.97	0.63
2:E:1630:LYS:O	2:E:1634:GLU:HG2	1.99	0.63
2:B:1623:SER:HB3	2:B:1627:ARG:HH12	1.64	0.63
2:B:1630:LYS:O	2:B:1634:GLU:HG2	1.99	0.63
3:C:7:VAL:HA	3:C:56:TRP:HB2	1.80	0.63
3:F:120:ARG:HH12	3:F:139:TYR:HB2	1.64	0.63
2:B:939:THR:O	2:B:943:MET:N	2.17	0.62
3:C:77:VAL:HG12	3:C:109:PRO:HG2	1.80	0.62
2:B:1062:GLU:OE2	2:B:1080:ARG:NH1	2.32	0.62
2:B:1362:TYR:HE1	2:B:1384:ARG:HG3	1.64	0.62
3:C:120:ARG:HH12	3:C:139:TYR:HB2	1.64	0.62
2:B:1323:GLU:HA	2:B:1326:GLU:HG2	1.80	0.62
2:E:1145:HIS:O	2:E:1149:ASN:ND2	2.32	0.62
2:E:968:HIS:HA	2:E:971:HIS:CD2	2.34	0.62
2:E:1323:GLU:HA	2:E:1326:GLU:HG2	1.80	0.62
2:B:1056:HIS:HD1	2:B:1057:GLU:H	1.46	0.62
2:E:1219:ASN:OD1	2:E:1401:GLN:NE2	2.32	0.62
3:F:138:THR:H	3:F:141:GLN:NE2	1.98	0.62
2:E:87:LEU:HD23	2:E:91:LEU:HD23	1.81	0.62
3:F:7:VAL:HA	3:F:56:TRP:HB2	1.80	0.62
2:B:843:PHE:O	2:B:846:SER:OG	2.10	0.62
2:B:1145:HIS:O	2:B:1149:ASN:ND2	2.32	0.62
3:C:66:ARG:H	3:C:66:ARG:HD3	1.64	0.62
2:E:569:LEU:HD12	2:E:620:PHE:HD2	1.65	0.62
2:E:1217:LYS:O	2:E:1221:MET:HG3	2.00	0.62
2:B:116:GLN:HG2	2:B:119:GLN:HE21	1.65	0.61
2:B:127:TRP:HD1	2:B:130:GLN:NE2	1.97	0.61
2:B:788:ASN:O	2:B:792:ARG:HG2	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:882:LEU:HA	2:B:885:GLN:HE21	1.65	0.61
2:E:882:LEU:HA	2:E:885:GLN:HE21	1.65	0.61
2:E:116:GLN:HG2	2:E:119:GLN:HE21	1.65	0.61
2:E:201:GLU:O	2:E:205:LEU:HB3	1.99	0.61
2:E:450:LEU:HB3	2:E:620:PHE:HZ	1.64	0.61
2:E:1284:GLN:HE21	2:E:1286:ASP:HB2	1.63	0.61
2:B:968:HIS:HA	2:B:971:HIS:CD2	2.34	0.61
2:E:1268:ALA:HA	2:E:1271:LEU:HD13	1.83	0.61
2:E:1462:PHE:O	2:E:1489:TYR:N	2.33	0.61
3:F:66:ARG:H	3:F:66:ARG:HD3	1.64	0.61
3:C:138:THR:H	3:C:141:GLN:NE2	1.98	0.61
2:B:1388:TYR:CE2	3:C:44:VAL:HA	2.35	0.61
2:B:883:THR:HG21	2:B:931:ARG:HB3	1.82	0.61
2:B:1219:ASN:OD1	2:B:1401:GLN:NE2	2.32	0.61
1:D:548:ILE:O	1:D:552:ARG:HG2	2.00	0.61
1:D:578:ARG:O	1:D:587:HIS:N	2.31	0.61
1:D:692:MET:HA	1:D:695:LYS:HE2	1.83	0.61
2:E:485:HIS:HB2	2:E:514:LYS:HB3	1.81	0.61
2:E:809:ALA:HB1	2:E:812:ILE:HB	1.82	0.61
2:E:853:VAL:O	2:E:857:LEU:HG	2.00	0.61
1:A:548:ILE:O	1:A:552:ARG:HG2	2.00	0.61
3:C:43:ASN:ND2	3:C:52:ASN:OD1	2.34	0.61
2:E:473:HIS:ND1	2:E:477:GLY:O	2.32	0.61
2:B:809:ALA:HB1	2:B:812:ILE:HB	1.82	0.61
2:B:853:VAL:O	2:B:857:LEU:HG	2.00	0.61
2:B:1462:PHE:O	2:B:1489:TYR:N	2.33	0.61
1:D:552:ARG:NH1	1:D:664:ILE:HG12	2.15	0.61
2:B:1206:ASP:O	2:B:1210:ILE:HG12	2.01	0.61
2:B:1449:GLN:OE1	2:B:1449:GLN:N	2.29	0.61
3:C:132:LYS:HD2	3:C:134:LEU:HD12	1.83	0.61
2:E:451:ILE:HD11	2:E:623:ALA:HB2	1.82	0.61
2:E:788:ASN:O	2:E:792:ARG:HG2	2.00	0.61
2:E:883:THR:HG21	2:E:931:ARG:HB3	1.82	0.61
2:B:450:LEU:HB3	2:B:620:PHE:HZ	1.64	0.61
2:B:1217:LYS:O	2:B:1221:MET:HG3	2.00	0.61
2:E:1056:HIS:HD1	2:E:1057:GLU:H	1.46	0.61
2:E:1362:TYR:HE1	2:E:1384:ARG:HG3	1.64	0.61
2:E:1478:GLU:OE2	2:E:1478:GLU:N	2.34	0.60
2:B:569:LEU:N	2:B:620:PHE:O	2.35	0.60
2:B:1135:GLU:O	2:B:1139:SER:N	2.34	0.60
2:B:1478:GLU:N	2:B:1478:GLU:OE2	2.34	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:1135:GLU:O	2:E:1139:SER:N	2.34	0.60
2:B:1120:LEU:O	2:B:1124:THR:OG1	2.10	0.60
2:B:166:ARG:O	2:B:171:ASN:HA	2.02	0.60
3:F:132:LYS:HD2	3:F:134:LEU:HD12	1.83	0.60
2:B:1416:GLU:HA	2:B:1419:LYS:HG2	1.83	0.60
2:E:1525:THR:HG21	3:F:37:PHE:HE2	1.65	0.60
3:F:153:LYS:NZ	3:F:154:TYR:O	2.34	0.60
2:E:1300:LEU:O	2:E:1304:ILE:HG13	2.02	0.60
1:A:536:LEU:HD23	2:B:31:ILE:HD11	1.83	0.60
2:B:463:PRO:HD2	2:B:503:GLN:HB3	1.83	0.60
2:B:569:LEU:HD12	2:B:620:PHE:HD2	1.65	0.60
2:B:789:ASN:O	2:B:792:ARG:N	2.34	0.60
3:C:153:LYS:NZ	3:C:154:TYR:O	2.34	0.60
2:E:463:PRO:HD2	2:E:503:GLN:HB3	1.84	0.60
2:E:1117:GLU:OE1	2:E:1119:GLU:N	2.34	0.60
2:E:1206:ASP:O	2:E:1210:ILE:HG12	2.00	0.60
2:B:1028:LEU:HA	2:B:1032:PHE:HD1	1.66	0.60
2:B:1111:GLU:OE1	2:B:1111:GLU:N	2.25	0.60
2:B:1117:GLU:OE1	2:B:1119:GLU:N	2.34	0.60
2:B:1196:LEU:O	2:B:1199:SER:OG	2.18	0.60
2:B:910:LEU:O	2:B:963:GLN:NE2	2.32	0.60
2:B:1169:LYS:HA	2:B:1172:LEU:HD12	1.82	0.60
2:E:569:LEU:N	2:E:620:PHE:O	2.35	0.60
2:E:1028:LEU:HA	2:E:1032:PHE:HD1	1.66	0.60
1:A:552:ARG:NH1	1:A:664:ILE:HG12	2.15	0.59
1:A:692:MET:HA	1:A:695:LYS:HE2	1.83	0.59
2:B:1522:MET:HE2	2:B:1593:ILE:HA	1.84	0.59
2:E:797:ALA:HA	2:E:800:MET:HG3	1.83	0.59
2:E:896:LYS:HA	2:E:899:HIS:CE1	2.37	0.59
2:E:1120:LEU:O	2:E:1124:THR:OG1	2.10	0.59
3:F:43:ASN:ND2	3:F:52:ASN:OD1	2.34	0.59
2:B:844:ILE:HB	2:B:881:LEU:HD11	1.84	0.59
2:B:1268:ALA:HA	2:B:1271:LEU:HD13	1.82	0.59
2:E:166:ARG:O	2:E:171:ASN:HA	2.02	0.59
2:E:1633:VAL:HA	2:E:1637:TYR:HB2	1.84	0.59
2:B:1468:PHE:CE2	2:B:1470:LYS:HB2	2.38	0.59
2:E:12:TYR:HB2	2:E:67:LYS:HB2	1.83	0.59
2:E:789:ASN:O	2:E:792:ARG:N	2.34	0.59
2:B:441:ASP:O	2:B:629:THR:OG1	2.20	0.59
2:B:473:HIS:ND1	2:B:477:GLY:O	2.32	0.59
2:B:530:THR:HA	2:B:549:VAL:HG22	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1149:ASN:HA	2:B:1236:ARG:HH22	1.68	0.59
1:D:551:GLN:HG3	2:E:106:TYR:HD2	1.67	0.59
2:E:239:ALA:HB3	2:E:262:TRP:HB3	1.84	0.59
2:E:1601:THR:HB	2:E:1605:ARG:HH21	1.67	0.59
2:B:12:TYR:HB2	2:B:67:LYS:HB2	1.83	0.59
2:B:1633:VAL:HA	2:B:1637:TYR:HB2	1.84	0.59
2:E:1468:PHE:CE2	2:E:1470:LYS:HB2	2.37	0.59
3:F:155:LEU:HD13	3:F:168:VAL:HA	1.85	0.59
2:B:790:SER:HA	2:B:793:GLN:NE2	2.18	0.59
2:B:879:LEU:HD23	2:B:931:ARG:HH22	1.67	0.59
2:B:896:LYS:HA	2:B:899:HIS:CE1	2.37	0.59
2:B:938:ARG:NH2	2:B:988:GLU:OE2	2.35	0.59
1:D:627:GLU:HG2	1:D:631:LEU:HB2	1.85	0.59
2:E:1067:ALA:O	2:E:1071:LYS:N	2.24	0.59
2:E:1416:GLU:HA	2:E:1419:LYS:HG2	1.83	0.59
2:E:1602:GLU:HA	2:E:1605:ARG:NE	2.18	0.59
2:B:451:ILE:HD11	2:B:623:ALA:HB2	1.82	0.59
2:B:556:ASN:N	2:B:560:THR:O	2.32	0.59
2:B:1506:GLN:NE2	2:B:1507:ILE:O	2.36	0.59
2:E:115:ARG:HA	2:E:118:GLN:HG3	1.85	0.59
2:E:790:SER:HA	2:E:793:GLN:NE2	2.18	0.59
2:E:1483:TRP:CE2	2:E:1514:PRO:HD3	2.37	0.59
1:A:564:LYS:O	1:A:573:LYS:NZ	2.19	0.59
2:B:1300:LEU:O	2:B:1304:ILE:HG13	2.02	0.59
2:E:879:LEU:HD23	2:E:931:ARG:HH22	1.67	0.59
2:E:1449:GLN:OE1	2:E:1449:GLN:N	2.29	0.59
2:B:1483:TRP:CE2	2:B:1514:PRO:HD3	2.37	0.59
1:D:530:SER:HA	1:D:533:ILE:HD12	1.85	0.59
1:A:667:ASP:OD1	1:A:678:MET:N	2.33	0.59
2:B:239:ALA:HB3	2:B:262:TRP:HB3	1.85	0.59
2:B:797:ALA:HA	2:B:800:MET:HG3	1.83	0.59
2:E:1169:LYS:HA	2:E:1172:LEU:HD12	1.83	0.59
2:E:1522:MET:HE1	2:E:1593:ILE:HA	1.85	0.59
2:B:115:ARG:HA	2:B:118:GLN:HG3	1.85	0.58
2:B:1121:ARG:O	2:B:1125:ILE:HD12	2.03	0.58
2:B:1452:ASN:OD1	2:B:1453:TYR:N	2.36	0.58
1:D:667:ASP:OD1	1:D:678:MET:N	2.33	0.58
2:E:938:ARG:NH2	2:E:988:GLU:OE2	2.35	0.58
2:E:1524:LEU:HA	2:E:1527:GLU:CD	2.24	0.58
2:B:1066:GLN:HA	2:B:1069:ARG:NH1	2.18	0.58
2:B:1067:ALA:O	2:B:1071:LYS:N	2.24	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:910:LEU:O	2:E:963:GLN:NE2	2.32	0.58
2:E:1506:GLN:NE2	2:E:1507:ILE:O	2.36	0.58
2:E:1593:ILE:O	2:E:1596:GLN:HB3	2.03	0.58
2:B:1491:THR:HA	2:B:1505:LYS:H	1.68	0.58
2:B:1601:THR:HB	2:B:1605:ARG:HH21	1.67	0.58
2:B:1615:LEU:O	2:B:1619:HIS:N	2.34	0.58
2:E:1121:ARG:O	2:E:1125:ILE:HD12	2.03	0.58
2:E:1196:LEU:O	2:E:1199:SER:OG	2.18	0.58
2:E:1513:SER:O	2:E:1517:ASN:N	2.31	0.58
2:E:1599:LEU:HA	2:E:1602:GLU:OE1	2.04	0.58
2:B:870:ARG:HH11	2:B:873:GLU:HB3	1.69	0.58
3:C:155:LEU:HD13	3:C:168:VAL:HA	1.85	0.58
2:E:870:ARG:HH11	2:E:873:GLU:HB3	1.69	0.58
2:B:62:THR:HG23	2:B:63:TYR:HD1	1.68	0.58
2:B:1159:VAL:O	2:B:1208:ARG:NH1	2.37	0.58
2:B:1307:TYR:O	2:B:1311:GLY:N	2.36	0.58
2:E:844:ILE:HB	2:E:881:LEU:HD11	1.85	0.58
2:E:1315:GLU:OE1	2:E:1315:GLU:N	2.31	0.58
1:A:551:GLN:HA	1:A:554:ASN:HD22	1.69	0.58
2:B:1536:HIS:HA	2:B:1542:LEU:HD13	1.86	0.58
2:E:530:THR:HA	2:E:549:VAL:HG22	1.85	0.58
2:B:1032:PHE:HB3	2:B:1043:TRP:HH2	1.69	0.58
2:B:1593:ILE:O	2:B:1596:GLN:HB3	2.03	0.58
2:B:1602:GLU:HA	2:B:1605:ARG:NE	2.17	0.58
2:E:59:PHE:CE2	2:E:63:TYR:HB3	2.39	0.58
2:E:195:GLU:HA	2:E:198:ILE:HG12	1.86	0.58
2:E:1388:TYR:HE2	3:F:44:VAL:HG13	1.68	0.58
2:E:1452:ASN:OD1	2:E:1453:TYR:N	2.36	0.58
2:E:1536:HIS:HA	2:E:1542:LEU:HD13	1.86	0.58
1:A:530:SER:HA	1:A:533:ILE:HD12	1.85	0.58
2:E:37:ILE:HG21	2:E:45:TYR:HB3	1.86	0.58
2:E:1121:ARG:HG2	2:E:1125:ILE:HD11	1.86	0.58
2:E:1395:SER:O	2:E:1399:LEU:HG	2.04	0.58
2:E:133:SER:HB2	2:E:135:THR:HG23	1.85	0.58
2:E:1032:PHE:HB3	2:E:1043:TRP:HH2	1.69	0.58
2:B:37:ILE:HG21	2:B:45:TYR:HB3	1.86	0.57
2:B:870:ARG:NH1	2:B:873:GLU:HB3	2.20	0.57
2:B:1513:SER:O	2:B:1517:ASN:N	2.31	0.57
2:E:1588:LEU:HD23	2:E:1591:ARG:HH21	1.68	0.57
1:A:627:GLU:HG2	1:A:631:LEU:HB2	1.85	0.57
2:B:1315:GLU:OE1	2:B:1315:GLU:N	2.31	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:62:THR:HG23	2:E:63:TYR:HD1	1.68	0.57
2:E:1391:ARG:NH2	2:E:1392:GLU:OE2	2.37	0.57
2:B:446:ILE:HB	2:B:515:VAL:HB	1.86	0.57
2:B:1391:ARG:NH2	2:B:1392:GLU:OE2	2.37	0.57
2:B:1588:LEU:HD23	2:B:1591:ARG:HH21	1.68	0.57
1:D:564:LYS:HG3	1:D:575:TRP:NE1	2.20	0.57
2:E:1068:LYS:HA	2:E:1071:LYS:HE2	1.85	0.57
2:E:1095:GLY:H	2:E:1098:LYS:HE3	1.70	0.57
2:E:1368:TYR:O	2:E:1425:TYR:N	2.32	0.57
2:B:638:LEU:O	2:B:642:ASN:N	2.37	0.57
2:B:757:LEU:HD11	2:B:816:ALA:HA	1.87	0.57
2:B:1121:ARG:HG2	2:B:1125:ILE:HD11	1.86	0.57
1:D:551:GLN:HA	1:D:554:ASN:HD22	1.69	0.57
2:E:1149:ASN:HA	2:E:1236:ARG:HH22	1.68	0.57
2:E:1515:LEU:HD22	2:E:1585:LYS:HB3	1.87	0.57
2:B:355:THR:HG21	2:B:372:VAL:HG22	1.86	0.57
2:B:1068:LYS:HA	2:B:1071:LYS:HE2	1.85	0.57
2:B:1392:GLU:HB2	3:C:166:LYS:HZ1	1.68	0.57
2:E:1390:ARG:NH2	3:F:23:TYR:O	2.37	0.57
2:B:254:ILE:HD12	2:B:294:VAL:HG13	1.86	0.57
2:B:1133:GLN:HE22	2:B:1183:HIS:CD2	2.23	0.57
2:B:1395:SER:O	2:B:1399:LEU:HG	2.04	0.57
2:E:37:ILE:HA	2:E:47:GLY:HA3	1.86	0.57
2:E:1066:GLN:HA	2:E:1069:ARG:NH1	2.18	0.57
2:E:1159:VAL:O	2:E:1208:ARG:NH1	2.37	0.57
2:E:1207:TYR:O	2:E:1211:ILE:HG12	2.05	0.57
2:E:1307:TYR:O	2:E:1311:GLY:N	2.36	0.57
2:B:59:PHE:CE2	2:B:63:TYR:HB3	2.39	0.57
2:E:246:TYR:HA	2:E:253:PHE:HA	1.87	0.57
2:B:1524:LEU:HA	2:B:1527:GLU:CD	2.24	0.57
2:B:1599:LEU:HA	2:B:1602:GLU:OE1	2.04	0.57
2:E:154:HIS:NE2	2:E:201:GLU:OE2	2.30	0.57
2:E:529:PHE:HE2	2:E:552:VAL:HG12	1.69	0.57
2:E:638:LEU:O	2:E:642:ASN:N	2.37	0.57
3:F:90:PHE:CE2	3:F:137:ILE:HB	2.40	0.57
3:F:91:GLU:O	3:F:95:ALA:HB3	2.04	0.57
2:B:529:PHE:HE2	2:B:552:VAL:HG12	1.69	0.57
2:E:355:THR:HG21	2:E:372:VAL:HG22	1.86	0.57
2:E:1115:THR:HA	2:E:1163:ARG:HH22	1.70	0.57
1:D:536:LEU:HG	2:E:18:ASN:OD1	2.05	0.57
1:A:564:LYS:HG3	1:A:575:TRP:NE1	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:578:ARG:O	1:A:587:HIS:N	2.31	0.56
3:C:90:PHE:CE2	3:C:137:ILE:HB	2.40	0.56
1:A:578:ARG:HB3	1:A:587:HIS:HB2	1.88	0.56
2:B:133:SER:HB2	2:B:135:THR:HG23	1.85	0.56
2:B:154:HIS:NE2	2:B:201:GLU:OE2	2.30	0.56
2:B:938:ARG:HA	2:B:941:ILE:HD12	1.87	0.56
2:B:1466:ARG:NH1	2:B:1467:PRO:O	2.38	0.56
2:E:1117:GLU:OE2	2:E:1121:ARG:N	2.26	0.56
2:B:195:GLU:HA	2:B:198:ILE:HG12	1.86	0.56
2:B:730:TYR:CE1	2:B:771:ARG:HD3	2.40	0.56
2:B:771:ARG:HH21	2:B:784:GLY:HA2	1.70	0.56
2:B:1078:ASP:OD1	2:B:1081:LYS:N	2.37	0.56
2:B:1207:TYR:O	2:B:1211:ILE:HG12	2.05	0.56
2:B:1515:LEU:HD22	2:B:1585:LYS:HB3	1.87	0.56
2:B:1617:PRO:HB2	2:B:1621:ARG:HH22	1.71	0.56
3:C:44:VAL:N	3:C:51:VAL:O	2.27	0.56
3:C:91:GLU:O	3:C:95:ALA:HB3	2.04	0.56
2:E:131:ILE:HD11	2:E:144:LEU:HG	1.88	0.56
2:E:182:ALA:HA	2:E:185:LYS:HG2	1.88	0.56
2:E:254:ILE:HD12	2:E:294:VAL:HG13	1.86	0.56
2:E:1499:LEU:HD11	2:E:1501:TRP:CZ2	2.40	0.56
2:E:1532:CYS:O	2:E:1535:GLN:NE2	2.38	0.56
2:B:297:VAL:HG22	2:B:326:VAL:HG22	1.87	0.56
2:E:156:ASN:HA	2:E:161:LEU:HD12	1.88	0.56
2:E:287:MET:HA	2:E:290:ILE:HG12	1.87	0.56
2:E:730:TYR:CE1	2:E:771:ARG:HD3	2.40	0.56
2:E:870:ARG:NH1	2:E:873:GLU:HB3	2.20	0.56
2:E:1078:ASP:OD1	2:E:1081:LYS:N	2.37	0.56
2:E:1160:GLU:OE2	2:E:1242:ARG:NH1	2.38	0.56
1:A:661:GLU:HA	1:A:664:ILE:HB	1.88	0.56
2:B:769:GLN:OE1	2:B:776:ARG:NH2	2.39	0.56
2:B:1117:GLU:CD	2:B:1120:LEU:HG	2.26	0.56
2:E:165:VAL:HG23	2:E:175:PRO:HD3	1.87	0.56
2:E:297:VAL:HG22	2:E:326:VAL:HG22	1.87	0.56
2:E:446:ILE:HB	2:E:515:VAL:HB	1.86	0.56
2:E:771:ARG:HH21	2:E:784:GLY:HA2	1.70	0.56
2:E:1111:GLU:OE1	2:E:1111:GLU:N	2.25	0.56
2:E:1344:LYS:O	2:E:1347:SER:OG	2.21	0.56
2:E:1491:THR:HA	2:E:1505:LYS:H	1.68	0.56
2:E:1617:PRO:HB2	2:E:1621:ARG:HH22	1.71	0.56
2:B:1160:GLU:OE2	2:B:1242:ARG:NH1	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:30:GLN:N	2:B:33:ASP:OD2	2.39	0.56
1:D:659:LYS:NZ	1:D:680:ASP:OD2	2.37	0.56
2:E:694:PHE:HZ	2:E:737:LEU:HB3	1.70	0.56
2:E:1032:PHE:HA	2:E:1036:ALA:HB3	1.88	0.56
2:E:1117:GLU:CD	2:E:1120:LEU:HG	2.26	0.56
2:E:1381:PHE:HA	2:E:1503:GLU:HA	1.88	0.56
2:E:1466:ARG:NH1	2:E:1467:PRO:O	2.38	0.56
2:E:1583:GLN:O	2:E:1586:VAL:HG12	2.06	0.56
1:A:723:VAL:HG23	2:B:2:ALA:HB1	1.86	0.56
2:E:59:PHE:CZ	2:E:63:TYR:HB3	2.41	0.56
2:E:745:ASP:H	2:E:804:ARG:HH12	1.53	0.56
2:E:769:GLN:OE1	2:E:776:ARG:NH2	2.39	0.56
2:E:450:LEU:HD13	2:E:468:VAL:HB	1.88	0.56
2:B:182:ALA:HA	2:B:185:LYS:HG2	1.87	0.56
2:B:246:TYR:HA	2:B:253:PHE:HA	1.87	0.56
2:B:438:LEU:N	2:B:441:ASP:OD2	2.38	0.56
2:B:1177:LEU:O	2:B:1181:ARG:HG2	2.05	0.56
2:B:1344:LYS:O	2:B:1347:SER:OG	2.21	0.56
2:E:757:LEU:HD11	2:E:816:ALA:HA	1.87	0.56
2:E:828:LYS:HE2	2:E:833:PRO:HG3	1.88	0.56
2:B:37:ILE:HA	2:B:47:GLY:HA3	1.86	0.55
2:B:745:ASP:H	2:B:804:ARG:HH12	1.53	0.55
2:E:938:ARG:HA	2:E:941:ILE:HD12	1.87	0.55
2:E:1545:HIS:O	2:E:1548:SER:OG	2.21	0.55
3:F:8:VAL:O	3:F:58:THR:OG1	2.20	0.55
2:B:532:ARG:O	2:B:534:ARG:NH1	2.39	0.55
2:B:1499:LEU:HD11	2:B:1501:TRP:CZ2	2.40	0.55
2:E:438:LEU:N	2:E:441:ASP:OD2	2.38	0.55
1:A:607:LYS:NZ	1:A:608:LEU:O	2.38	0.55
2:B:165:VAL:HG23	2:B:175:PRO:HD3	1.87	0.55
2:B:1115:THR:HA	2:B:1163:ARG:HH22	1.70	0.55
2:B:1381:PHE:HA	2:B:1503:GLU:HA	1.88	0.55
2:E:30:GLN:N	2:E:33:ASP:OD2	2.39	0.55
2:E:532:ARG:O	2:E:534:ARG:NH1	2.39	0.55
2:E:973:ILE:HD13	2:E:976:PHE:CZ	2.41	0.55
3:F:67:LEU:HD13	3:F:70:LEU:HD12	1.89	0.55
2:B:287:MET:HA	2:B:290:ILE:HG12	1.87	0.55
2:B:694:PHE:HZ	2:B:737:LEU:HB3	1.70	0.55
2:B:855:GLN:OE1	2:B:855:GLN:N	2.28	0.55
2:B:1449:GLN:HA	2:B:1452:ASN:ND2	2.22	0.55
2:E:1133:GLN:HE22	2:E:1183:HIS:CD2	2.23	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:1292:THR:HG23	2:E:1295:GLU:H	1.71	0.55
2:E:1465:SER:HA	2:E:1486:ARG:HG2	1.88	0.55
2:B:450:LEU:HD13	2:B:468:VAL:HB	1.88	0.55
2:B:973:ILE:HD13	2:B:976:PHE:CZ	2.41	0.55
2:B:1095:GLY:H	2:B:1098:LYS:HE3	1.70	0.55
2:B:1482:MET:HB3	2:B:1517:ASN:HD22	1.72	0.55
2:B:1545:HIS:O	2:B:1548:SER:OG	2.21	0.55
2:B:1583:GLN:O	2:B:1586:VAL:HG12	2.06	0.55
1:D:578:ARG:HB3	1:D:587:HIS:HB2	1.88	0.55
2:E:1449:GLN:HA	2:E:1452:ASN:ND2	2.22	0.55
1:D:551:GLN:HG3	2:E:106:TYR:CD2	2.42	0.55
1:D:643:SER:OG	1:D:653:ASN:ND2	2.39	0.55
2:B:59:PHE:CZ	2:B:63:TYR:HB3	2.41	0.55
2:B:131:ILE:HD11	2:B:144:LEU:HG	1.88	0.55
2:B:1032:PHE:HA	2:B:1036:ALA:HB3	1.88	0.55
2:B:1532:CYS:O	2:B:1535:GLN:NE2	2.38	0.55
2:E:441:ASP:O	2:E:629:THR:OG1	2.20	0.55
2:E:472:VAL:HG12	2:E:527:ILE:HG12	1.89	0.55
2:E:1177:LEU:O	2:E:1181:ARG:HG2	2.05	0.55
1:A:546:GLU:HA	1:A:549:LYS:HG2	1.88	0.55
2:B:572:TYR:OH	2:B:589:PRO:O	2.21	0.55
2:B:1435:MET:SD	2:B:1455:ARG:HG2	2.47	0.55
2:B:1584:GLU:O	2:B:1588:LEU:HG	2.07	0.55
2:B:1618:LEU:O	2:B:1622:LEU:HG	2.07	0.55
2:E:1618:LEU:O	2:E:1622:LEU:HG	2.07	0.55
2:B:155:GLY:HA2	2:B:158:MET:SD	2.47	0.55
2:B:664:GLU:HA	2:B:667:LYS:HE3	1.88	0.55
3:C:67:LEU:HD13	3:C:70:LEU:HD12	1.89	0.55
1:D:546:GLU:HA	1:D:549:LYS:HG2	1.88	0.55
2:E:166:ARG:NH2	2:E:168:ASP:HB2	2.22	0.55
2:E:870:ARG:HH12	2:E:874:CYS:HB3	1.72	0.55
2:E:1238:ASP:HA	2:E:1241:ILE:HD12	1.88	0.55
2:B:657:LEU:HD12	2:B:660:VAL:HG21	1.88	0.55
2:B:1168:TYR:CE1	2:B:1172:LEU:HD11	2.42	0.55
2:B:1589:LEU:HD23	2:B:1592:LEU:HD12	1.89	0.55
2:E:1435:MET:SD	2:E:1455:ARG:HG2	2.47	0.55
1:A:561:CYS:SG	1:A:594:SER:OG	2.65	0.54
1:A:576:TYR:HB2	1:A:598:GLU:HG2	1.90	0.54
2:B:870:ARG:HH12	2:B:874:CYS:HB3	1.72	0.54
2:B:1043:TRP:H	2:B:1043:TRP:HE3	1.55	0.54
2:B:1292:THR:HG23	2:B:1295:GLU:H	1.71	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1536:HIS:CG	2:B:1542:LEU:HD22	2.42	0.54
2:B:1560:MET:SD	3:C:36:VAL:HA	2.47	0.54
2:E:288:ASP:HA	2:E:291:ARG:HE	1.73	0.54
2:E:1040:LEU:HD12	2:E:1097:HIS:CE1	2.42	0.54
2:B:156:ASN:HA	2:B:161:LEU:HD12	1.88	0.54
2:B:1040:LEU:HD12	2:B:1097:HIS:CE1	2.42	0.54
3:C:8:VAL:O	3:C:58:THR:OG1	2.20	0.54
3:C:141:GLN:OE1	3:C:141:GLN:N	2.28	0.54
1:D:576:TYR:HB2	1:D:598:GLU:HG2	1.89	0.54
1:D:661:GLU:HA	1:D:664:ILE:HB	1.88	0.54
2:E:657:LEU:HD12	2:E:660:VAL:HG21	1.88	0.54
2:E:1168:TYR:CE1	2:E:1172:LEU:HD11	2.42	0.54
2:E:1415:GLY:O	2:E:1419:LYS:N	2.41	0.54
2:E:1584:GLU:O	2:E:1588:LEU:HG	2.07	0.54
2:B:1238:ASP:HA	2:B:1241:ILE:HD12	1.88	0.54
2:E:457:LYS:HG2	2:E:463:PRO:HA	1.89	0.54
2:E:664:GLU:HA	2:E:667:LYS:HE3	1.88	0.54
2:E:1536:HIS:CG	2:E:1542:LEU:HD22	2.42	0.54
2:E:1589:LEU:HD23	2:E:1592:LEU:HD12	1.89	0.54
2:B:19:TYR:O	2:B:28:SER:HA	2.08	0.54
2:B:472:VAL:HG12	2:B:527:ILE:HG12	1.89	0.54
2:B:828:LYS:HE2	2:B:833:PRO:HG3	1.88	0.54
2:E:1043:TRP:H	2:E:1043:TRP:HE3	1.55	0.54
3:F:65:ASP:HA	3:F:68:ARG:HG2	1.90	0.54
1:A:643:SER:OG	1:A:653:ASN:ND2	2.39	0.54
2:B:1623:SER:HB3	2:B:1627:ARG:NH1	2.23	0.54
1:D:561:CYS:SG	1:D:594:SER:OG	2.65	0.54
2:E:155:GLY:HA2	2:E:158:MET:SD	2.47	0.54
2:B:166:ARG:NH2	2:B:168:ASP:HB2	2.22	0.54
2:B:457:LYS:HG2	2:B:463:PRO:HA	1.89	0.54
1:D:697:ARG:HB3	2:E:31:ILE:HB	1.90	0.54
2:E:744:ALA:HA	2:E:753:LEU:HD22	1.90	0.54
2:E:1280:PRO:HA	2:E:1283:LEU:HD23	1.89	0.54
2:B:192:LYS:HG3	2:B:196:GLU:OE2	2.08	0.54
2:E:820:LEU:HG	2:E:821:PRO:HD3	1.90	0.54
2:B:1362:TYR:HD2	2:B:1462:PHE:HE2	1.56	0.54
1:A:567:ALA:HB3	1:A:573:LYS:HD3	1.90	0.54
1:A:643:SER:HA	1:A:652:LEU:O	2.08	0.54
2:B:259:LEU:HD22	2:B:486:PRO:HB2	1.90	0.54
2:B:649:ASN:O	2:B:653:ASN:N	2.29	0.54
2:B:1465:SER:HA	2:B:1486:ARG:HG2	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:192:LYS:HG3	2:E:196:GLU:OE2	2.08	0.54
2:E:1482:MET:HB3	2:E:1517:ASN:HD22	1.72	0.54
1:A:578:ARG:HH22	1:A:601:HIS:H	1.56	0.53
2:B:99:ALA:O	2:B:103:ARG:HG2	2.08	0.53
2:B:1368:TYR:O	2:B:1425:TYR:N	2.32	0.53
2:B:1488:THR:N	2:B:1508:SER:O	2.41	0.53
1:D:551:GLN:OE1	1:D:552:ARG:NH2	2.38	0.53
2:E:460:LYS:HD2	2:E:464:LYS:HG2	1.90	0.53
1:A:659:LYS:NZ	1:A:680:ASP:OD2	2.37	0.53
2:B:1251:HIS:NE2	2:B:1498:ILE:O	2.42	0.53
2:B:1590:LYS:HB3	2:B:1639:VAL:HG12	1.90	0.53
3:C:69:PRO:HA	3:C:72:TYR:CD2	2.43	0.53
2:E:1058:SER:O	2:E:1062:GLU:HG3	2.08	0.53
2:B:281:PHE:HD1	2:B:428:ALA:HB3	1.74	0.53
2:B:288:ASP:HA	2:B:291:ARG:HE	1.72	0.53
2:B:868:LEU:O	2:B:871:GLN:HG3	2.09	0.53
2:B:1415:GLY:O	2:B:1419:LYS:N	2.41	0.53
1:D:567:ALA:HB3	1:D:573:LYS:HD3	1.90	0.53
2:E:19:TYR:O	2:E:28:SER:HA	2.08	0.53
2:E:273:LYS:O	2:E:277:LEU:HG	2.08	0.53
2:E:740:TYR:HA	2:E:749:LYS:HD3	1.90	0.53
2:E:1484:ILE:HB	2:E:1512:ILE:HD12	1.91	0.53
2:E:1488:THR:N	2:E:1508:SER:O	2.41	0.53
2:B:18:ASN:HA	2:B:29:LEU:O	2.09	0.53
2:B:460:LYS:HD2	2:B:464:LYS:HG2	1.90	0.53
2:B:1280:PRO:HA	2:B:1283:LEU:HD23	1.89	0.53
2:B:1466:ARG:O	2:B:1484:ILE:HA	2.09	0.53
2:E:99:ALA:O	2:E:103:ARG:HG2	2.08	0.53
2:E:960:LEU:O	2:E:964:MET:HG2	2.08	0.53
2:E:964:MET:O	2:E:1019:ARG:NH2	2.41	0.53
2:B:720:ILE:HG21	2:B:765:ARG:HG2	1.91	0.53
2:B:964:MET:O	2:B:1019:ARG:NH2	2.41	0.53
2:B:1490:THR:OG1	2:B:1506:GLN:HB3	2.08	0.53
2:E:589:PRO:HB3	2:E:594:GLU:HB3	1.90	0.53
2:E:632:THR:HG21	2:E:638:LEU:HD21	1.91	0.53
2:E:787:PHE:O	2:E:791:ILE:HG12	2.09	0.53
2:E:1392:GLU:OE1	2:E:1392:GLU:N	2.40	0.53
2:B:1392:GLU:OE1	2:B:1392:GLU:N	2.40	0.53
2:B:1527:GLU:O	2:B:1530:SER:N	2.41	0.53
3:C:65:ASP:HA	3:C:68:ARG:HG2	1.90	0.53
2:E:259:LEU:HD22	2:E:486:PRO:HB2	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:720:ILE:HG21	2:E:765:ARG:HG2	1.91	0.53
2:E:1390:ARG:NH2	3:F:26:ASN:OD1	2.42	0.53
2:E:1404:ASN:OD1	2:E:1424:GLN:HB2	2.08	0.53
2:B:14:VAL:HB	2:B:65:HIS:HB3	1.90	0.53
2:B:179:SER:OG	2:B:182:ALA:HB3	2.09	0.53
2:B:744:ALA:HA	2:B:753:LEU:HD22	1.90	0.53
2:B:909:ILE:HG13	2:B:910:LEU:HD12	1.91	0.53
2:B:1058:SER:O	2:B:1062:GLU:HG3	2.08	0.53
2:B:1332:VAL:HG13	2:B:1334:ASP:H	1.74	0.53
2:E:1615:LEU:O	2:E:1619:HIS:N	2.34	0.53
2:B:105:LEU:HD13	2:B:114:PHE:HD1	1.74	0.53
3:C:66:ARG:NH1	3:C:67:LEU:HD23	2.24	0.53
1:D:643:SER:HA	1:D:652:LEU:O	2.08	0.53
2:E:575:ASP:HB3	2:E:578:LYS:HB2	1.90	0.53
2:E:868:LEU:O	2:E:871:GLN:HG3	2.09	0.53
2:E:1490:THR:OG1	2:E:1506:GLN:HB3	2.08	0.53
2:E:1527:GLU:O	2:E:1530:SER:N	2.41	0.53
3:F:69:PRO:HA	3:F:72:TYR:CD2	2.43	0.53
2:B:589:PRO:HB3	2:B:594:GLU:HB3	1.90	0.53
2:B:1314:TRP:O	2:B:1318:ILE:HG12	2.09	0.53
2:E:166:ARG:HH22	2:E:168:ASP:HB2	1.74	0.53
2:E:1163:ARG:H	2:E:1208:ARG:HH12	1.57	0.53
2:B:7:THR:HG22	2:B:9:ARG:H	1.74	0.53
2:B:273:LYS:O	2:B:277:LEU:HG	2.08	0.53
2:B:1623:SER:HB3	2:B:1627:ARG:HH22	1.74	0.53
1:D:652:LEU:HB3	1:D:654:PHE:CE2	2.44	0.53
2:E:14:VAL:HB	2:E:65:HIS:HB3	1.90	0.53
2:E:97:GLU:O	2:E:101:ILE:HG13	2.09	0.53
2:B:306:MET:HB2	2:B:318:LEU:HD12	1.91	0.52
2:B:965:ASP:HB3	2:B:968:HIS:CG	2.44	0.52
2:B:1484:ILE:HB	2:B:1512:ILE:HD12	1.91	0.52
2:E:17:TYR:OH	2:E:63:TYR:OH	2.19	0.52
2:E:1623:SER:HB3	2:E:1627:ARG:NH1	2.23	0.52
3:F:66:ARG:NH1	3:F:67:LEU:HD23	2.24	0.52
2:B:740:TYR:HA	2:B:749:LYS:HD3	1.90	0.52
2:B:960:LEU:O	2:B:964:MET:HG2	2.08	0.52
2:B:1388:TYR:HD2	3:C:45:MET:HB3	1.73	0.52
2:E:965:ASP:HB3	2:E:968:HIS:CG	2.44	0.52
2:E:1362:TYR:HD2	2:E:1462:PHE:HE2	1.56	0.52
3:F:141:GLN:OE1	3:F:141:GLN:N	2.28	0.52
2:B:166:ARG:HH22	2:B:168:ASP:HB2	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:534:ARG:HG3	2:B:541:ASP:OD1	2.10	0.52
2:B:569:LEU:HB2	2:B:620:PHE:HB3	1.92	0.52
2:B:664:GLU:OE1	2:B:664:GLU:N	2.34	0.52
2:B:758:LYS:NZ	2:B:819:TYR:OH	2.43	0.52
1:D:578:ARG:HH22	1:D:601:HIS:H	1.56	0.52
2:E:179:SER:OG	2:E:182:ALA:HB3	2.09	0.52
2:E:855:GLN:OE1	2:E:855:GLN:N	2.28	0.52
2:E:1466:ARG:O	2:E:1484:ILE:HA	2.09	0.52
1:A:652:LEU:HB3	1:A:654:PHE:CE2	2.44	0.52
2:B:1231:TYR:O	2:B:1235:LYS:N	2.42	0.52
2:B:1404:ASN:OD1	2:B:1424:GLN:HB2	2.08	0.52
1:D:700:ASP:HB2	2:E:32:GLY:HA2	1.90	0.52
2:E:7:THR:HG22	2:E:9:ARG:H	1.74	0.52
2:E:758:LYS:NZ	2:E:819:TYR:OH	2.43	0.52
2:E:1251:HIS:NE2	2:E:1498:ILE:O	2.42	0.52
3:F:149:ILE:HG23	3:F:151:ALA:H	1.74	0.52
2:B:143:GLU:HG3	2:B:147:LYS:NZ	2.24	0.52
2:B:192:LYS:O	2:B:195:GLU:HG2	2.10	0.52
2:B:232:VAL:O	2:B:398:GLY:N	2.42	0.52
2:B:820:LEU:HG	2:B:821:PRO:HD3	1.90	0.52
2:B:1588:LEU:O	2:B:1592:LEU:HG	2.10	0.52
3:C:116:LYS:HB3	3:C:119:LEU:HB2	1.92	0.52
2:E:353:MET:HG3	2:E:374:GLY:O	2.10	0.52
2:E:1588:LEU:O	2:E:1592:LEU:HG	2.10	0.52
3:F:116:LYS:HB3	3:F:119:LEU:HB2	1.92	0.52
1:A:697:ARG:HE	2:B:30:GLN:HG2	1.75	0.52
2:B:876:GLU:N	2:B:876:GLU:OE1	2.43	0.52
2:B:1024:PHE:HA	2:B:1027:VAL:HG22	1.91	0.52
2:E:306:MET:HB2	2:E:318:LEU:HD12	1.91	0.52
2:B:575:ASP:HB3	2:B:578:LYS:HB2	1.90	0.52
2:B:632:THR:HG21	2:B:638:LEU:HD21	1.91	0.52
2:B:1113:THR:HG21	2:B:1128:PHE:HE2	1.75	0.52
2:B:1615:LEU:HA	2:B:1618:LEU:HD12	1.92	0.52
2:E:143:GLU:HG3	2:E:147:LYS:NZ	2.24	0.52
2:E:192:LYS:O	2:E:195:GLU:HG2	2.10	0.52
2:E:473:HIS:HB2	2:E:526:HIS:CE1	2.45	0.52
2:E:1024:PHE:HA	2:E:1027:VAL:HG22	1.91	0.52
2:E:1314:TRP:O	2:E:1318:ILE:HG12	2.09	0.52
3:C:77:VAL:HG13	3:C:176:VAL:HG23	1.92	0.52
3:C:149:ILE:HG23	3:C:151:ALA:H	1.74	0.52
2:E:18:ASN:HA	2:E:29:LEU:O	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:165:VAL:O	2:E:171:ASN:ND2	2.33	0.52
1:A:565:LEU:HD11	1:A:653:ASN:HB2	1.92	0.52
2:B:97:GLU:O	2:B:101:ILE:HG13	2.09	0.52
2:B:879:LEU:HD23	2:B:924:HIS:CE1	2.45	0.52
2:B:883:THR:CG2	2:B:931:ARG:HB3	2.40	0.52
2:B:1522:MET:HE2	2:B:1593:ILE:HG22	1.92	0.52
2:E:534:ARG:HG3	2:E:541:ASP:OD1	2.10	0.52
2:E:1332:VAL:HG13	2:E:1334:ASP:H	1.74	0.52
2:E:1590:LYS:HB3	2:E:1639:VAL:HG12	1.90	0.52
2:E:1615:LEU:HA	2:E:1618:LEU:HD12	1.92	0.52
2:B:85:LEU:O	2:B:88:VAL:HG22	2.10	0.51
2:B:522:VAL:HA	2:B:525:CYS:HB2	1.92	0.51
2:B:1156:ASP:OD1	2:B:1242:ARG:NH2	2.44	0.51
2:B:1555:VAL:HG21	2:B:1622:LEU:HD22	1.93	0.51
2:E:876:GLU:OE1	2:E:876:GLU:N	2.43	0.51
2:B:1515:LEU:O	2:B:1519:ILE:HG13	2.11	0.51
2:E:46:ARG:HA	2:E:57:GLY:O	2.10	0.51
2:E:281:PHE:HD1	2:E:428:ALA:HB3	1.74	0.51
2:E:1464:TYR:O	2:E:1486:ARG:HA	2.11	0.51
2:E:1522:MET:HE1	2:E:1593:ILE:HG22	1.91	0.51
2:E:1623:SER:HB3	2:E:1627:ARG:HH22	1.74	0.51
2:B:46:ARG:HA	2:B:57:GLY:O	2.10	0.51
2:E:105:LEU:HD13	2:E:114:PHE:HD1	1.74	0.51
2:E:716:LEU:O	2:E:720:ILE:HG13	2.10	0.51
2:B:25:VAL:HG11	2:B:56:LYS:HE2	1.93	0.51
2:B:167:ASP:OD1	2:B:167:ASP:N	2.44	0.51
2:B:226:VAL:HG22	2:B:403:LEU:HD22	1.92	0.51
2:E:85:LEU:O	2:E:88:VAL:HG22	2.10	0.51
2:B:787:PHE:O	2:B:791:ILE:HG12	2.09	0.51
2:B:1353:ILE:HD13	2:E:1335:TYR:HB2	1.93	0.51
1:D:607:LYS:NZ	1:D:608:LEU:O	2.38	0.51
2:E:962:GLN:NE2	2:E:963:GLN:HG3	2.26	0.51
2:E:1113:THR:HG21	2:E:1128:PHE:HE2	1.75	0.51
2:E:1165:ASP:O	2:E:1168:TYR:HB3	2.11	0.51
2:E:1525:THR:HA	2:E:1528:ARG:HH11	1.75	0.51
2:B:1368:TYR:N	2:B:1425:TYR:O	2.42	0.51
2:B:1557:PRO:HB2	2:B:1561:GLY:HA2	1.92	0.51
1:D:693:GLU:O	1:D:697:ARG:HG2	2.11	0.51
2:E:883:THR:CG2	2:E:931:ARG:HB3	2.40	0.51
2:E:1231:TYR:CE2	2:E:1243:TYR:HE1	2.29	0.51
2:B:14:VAL:O	2:B:64:ILE:HA	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1231:TYR:CE2	2:B:1243:TYR:HE1	2.29	0.51
2:B:1371:GLY:C	2:B:1424:GLN:HE21	2.14	0.51
2:E:232:VAL:O	2:E:398:GLY:N	2.42	0.51
2:E:1256:ASN:ND2	2:E:1500:LYS:HD2	2.26	0.51
2:E:1417:ASP:N	2:E:1417:ASP:OD1	2.43	0.51
2:E:1557:PRO:HB2	2:E:1561:GLY:HA2	1.92	0.51
1:A:637:VAL:HG12	1:A:640:LEU:HD12	1.93	0.51
1:A:693:GLU:O	1:A:697:ARG:HG2	2.11	0.51
2:B:473:HIS:HB2	2:B:526:HIS:CE1	2.45	0.51
2:B:1197:VAL:O	2:B:1201:LEU:HG	2.11	0.51
1:D:565:LEU:HD11	1:D:653:ASN:HB2	1.92	0.51
2:E:226:VAL:HG22	2:E:403:LEU:HD22	1.92	0.51
2:E:879:LEU:HD23	2:E:924:HIS:CE1	2.45	0.51
2:E:1485:GLU:OE1	2:E:1485:GLU:N	2.44	0.51
2:B:1163:ARG:H	2:B:1208:ARG:HH12	1.57	0.51
2:E:25:VAL:HG11	2:E:56:LYS:HE2	1.93	0.51
3:F:82:PHE:CD2	3:F:90:PHE:HE1	2.29	0.51
2:B:235:ILE:HG12	2:B:322:PHE:CE2	2.47	0.51
2:B:915:ARG:NH1	2:B:915:ARG:HA	2.26	0.51
2:B:1390:ARG:NH2	3:C:26:ASN:OD1	2.44	0.51
2:B:1485:GLU:OE1	2:B:1485:GLU:N	2.44	0.51
2:E:522:VAL:HA	2:E:525:CYS:HB2	1.92	0.51
2:E:670:GLN:HG3	2:E:719:TYR:CD1	2.45	0.51
2:E:810:VAL:HG13	2:E:852:LEU:HD21	1.93	0.51
2:B:353:MET:HG3	2:B:374:GLY:O	2.10	0.50
2:B:826:ASP:HA	2:B:829:LEU:HB2	1.92	0.50
3:C:82:PHE:CD1	3:C:112:LEU:HD11	2.47	0.50
2:E:915:ARG:NH1	2:E:915:ARG:HA	2.26	0.50
2:E:1554:ILE:HD13	3:F:37:PHE:CE2	2.46	0.50
3:F:21:ILE:HD11	3:F:35:THR:HG23	1.93	0.50
2:B:64:ILE:HG22	2:B:66:LEU:HD22	1.92	0.50
2:B:670:GLN:HG3	2:B:719:TYR:CD1	2.45	0.50
2:B:716:LEU:O	2:B:720:ILE:HG13	2.10	0.50
2:B:1165:ASP:O	2:B:1168:TYR:HB3	2.11	0.50
2:B:1283:LEU:HD11	2:B:1291:TYR:HB2	1.92	0.50
3:C:21:ILE:HD11	3:C:35:THR:HG23	1.93	0.50
1:D:561:CYS:HA	1:D:576:TYR:HA	1.93	0.50
2:E:14:VAL:O	2:E:64:ILE:HA	2.11	0.50
2:E:569:LEU:HB2	2:E:620:PHE:HB3	1.92	0.50
2:E:1283:LEU:HD11	2:E:1291:TYR:HB2	1.92	0.50
2:B:25:VAL:HG23	2:B:57:GLY:HA2	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:859:CYS:O	2:B:863:ILE:HG12	2.11	0.50
2:B:879:LEU:HG	2:B:931:ARG:HH12	1.77	0.50
2:E:80:VAL:HG12	2:E:85:LEU:HD11	1.94	0.50
2:E:879:LEU:HG	2:E:931:ARG:HH12	1.76	0.50
2:E:1197:VAL:O	2:E:1201:LEU:HG	2.11	0.50
2:E:1231:TYR:O	2:E:1235:LYS:N	2.41	0.50
2:B:923:VAL:O	2:B:927:LEU:HG	2.11	0.50
2:B:1106:VAL:O	2:B:1109:ILE:HG22	2.12	0.50
2:B:1307:TYR:HD1	2:B:1310:LYS:HE2	1.77	0.50
2:B:1585:LYS:HG3	2:B:1588:LEU:HD12	1.93	0.50
2:E:25:VAL:HG23	2:E:57:GLY:HA2	1.93	0.50
2:E:465:ASN:O	2:E:533:HIS:HA	2.12	0.50
2:E:866:SER:C	2:E:868:LEU:H	2.15	0.50
2:E:909:ILE:HG13	2:E:910:LEU:HD12	1.91	0.50
2:E:1275:ASP:OD2	2:E:1275:ASP:N	2.43	0.50
2:E:1585:LYS:HG3	2:E:1588:LEU:HD12	1.93	0.50
3:F:77:VAL:HG13	3:F:176:VAL:HG23	1.92	0.50
1:A:561:CYS:HA	1:A:576:TYR:HA	1.93	0.50
2:B:1464:TYR:O	2:B:1486:ARG:HA	2.11	0.50
2:B:1525:THR:HA	2:B:1528:ARG:HH11	1.75	0.50
2:E:923:VAL:O	2:E:927:LEU:HG	2.11	0.50
2:E:965:ASP:HB3	2:E:968:HIS:CD2	2.47	0.50
1:A:590:ASP:H	1:A:604:LEU:HD22	1.77	0.50
2:B:465:ASN:O	2:B:533:HIS:HA	2.12	0.50
2:B:700:ILE:O	2:B:704:ILE:HG13	2.12	0.50
2:B:962:GLN:NE2	2:B:963:GLN:HG3	2.26	0.50
3:C:82:PHE:CD2	3:C:90:PHE:HE1	2.29	0.50
1:D:562:PHE:N	1:D:575:TRP:O	2.40	0.50
1:D:649:ASN:O	1:D:649:ASN:ND2	2.45	0.50
2:E:826:ASP:HA	2:E:829:LEU:HB2	1.92	0.50
2:E:1079:MET:HA	2:E:1082:GLU:OE2	2.11	0.50
2:B:1098:LYS:O	2:B:1102:ILE:HG13	2.11	0.50
2:B:1256:ASN:ND2	2:B:1500:LYS:HD2	2.26	0.50
2:E:48:TYR:HB3	2:E:53:LYS:HD2	1.94	0.50
2:E:1156:ASP:OD1	2:E:1242:ARG:NH2	2.44	0.50
3:F:82:PHE:CD1	3:F:112:LEU:HD11	2.47	0.50
2:B:584:PHE:O	2:B:587:THR:OG1	2.26	0.50
2:B:879:LEU:O	2:B:882:LEU:N	2.45	0.50
1:D:590:ASP:H	1:D:604:LEU:HD22	1.77	0.50
2:E:64:ILE:HG22	2:E:66:LEU:HD22	1.92	0.50
2:E:235:ILE:HG12	2:E:322:PHE:CE2	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:1183:HIS:CG	2:E:1184:LYS:H	2.30	0.50
2:E:1555:VAL:HG21	2:E:1622:LEU:HD22	1.93	0.50
2:B:866:SER:C	2:B:868:LEU:H	2.15	0.50
2:B:871:GLN:OE1	2:B:875:ARG:NH1	2.45	0.50
2:E:16:ILE:HG23	2:E:17:TYR:CD1	2.47	0.50
2:E:172:ILE:HD12	2:E:175:PRO:HG2	1.94	0.50
2:E:1098:LYS:O	2:E:1102:ILE:HG13	2.11	0.50
2:E:1128:PHE:O	2:E:1131:MET:HG2	2.12	0.50
2:E:1129:PHE:HA	2:E:1132:MET:HG3	1.94	0.50
2:E:1515:LEU:O	2:E:1519:ILE:HG13	2.11	0.50
2:B:1183:HIS:CG	2:B:1184:LYS:H	2.30	0.49
1:D:555:ARG:HH22	2:E:109:ASN:HD21	1.58	0.49
2:E:1106:VAL:O	2:E:1109:ILE:HG22	2.12	0.49
2:E:1371:GLY:C	2:E:1424:GLN:HE21	2.15	0.49
2:B:80:VAL:HG12	2:B:85:LEU:HD11	1.93	0.49
2:B:156:ASN:HB3	2:B:161:LEU:HB2	1.94	0.49
2:B:373:ILE:HG23	2:B:376:ASN:HB2	1.93	0.49
2:B:810:VAL:HG13	2:B:852:LEU:HD21	1.93	0.49
2:B:965:ASP:HB3	2:B:968:HIS:CD2	2.47	0.49
2:B:1079:MET:HA	2:B:1082:GLU:OE2	2.11	0.49
2:E:4:TRP:CZ3	2:E:46:ARG:HG2	2.47	0.49
2:E:1054:LEU:HD11	2:E:1080:ARG:HB3	1.94	0.49
2:B:4:TRP:CZ3	2:B:46:ARG:HG2	2.47	0.49
2:B:44:TRP:CE3	2:B:58:ILE:HG22	2.48	0.49
2:B:194:ILE:O	2:B:198:ILE:HG23	2.12	0.49
1:D:680:ASP:N	1:D:680:ASP:OD1	2.45	0.49
2:E:194:ILE:O	2:E:198:ILE:HG23	2.12	0.49
2:E:859:CYS:O	2:E:863:ILE:HG12	2.11	0.49
1:A:541:GLN:O	1:A:544:ILE:HG22	2.12	0.49
1:A:551:GLN:OE1	1:A:552:ARG:NH2	2.38	0.49
2:B:7:THR:O	2:B:10:GLN:NE2	2.45	0.49
2:B:16:ILE:HG23	2:B:17:TYR:CD1	2.47	0.49
2:B:1040:LEU:HD22	2:B:1043:TRP:CH2	2.48	0.49
2:B:1482:MET:HE1	3:C:34:PRO:HG2	1.93	0.49
3:C:2:GLN:HE22	3:C:4:ILE:HD11	1.77	0.49
1:D:637:VAL:HG12	1:D:640:LEU:HD12	1.93	0.49
2:E:649:ASN:O	2:E:653:ASN:N	2.29	0.49
2:E:879:LEU:O	2:E:882:LEU:N	2.45	0.49
1:A:564:LYS:H	1:A:573:LYS:HD2	1.78	0.49
2:B:48:TYR:HB3	2:B:53:LYS:HD2	1.93	0.49
2:B:721:TYR:OH	2:B:765:ARG:NE	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:959:ALA:O	2:B:962:GLN:NE2	2.46	0.49
2:B:1545:HIS:O	2:B:1549:MET:HG2	2.12	0.49
2:E:44:TRP:CE3	2:E:58:ILE:HG22	2.48	0.49
2:E:721:TYR:OH	2:E:765:ARG:NE	2.46	0.49
2:E:927:LEU:CB	2:E:931:ARG:HH21	2.25	0.49
2:E:1307:TYR:HD1	2:E:1310:LYS:HE2	1.77	0.49
1:A:563:ARG:HB2	1:A:655:ILE:O	2.12	0.49
2:B:308:LEU:HG	2:B:320:ARG:HH22	1.78	0.49
1:D:563:ARG:HB2	1:D:655:ILE:O	2.12	0.49
2:E:373:ILE:HG23	2:E:376:ASN:HB2	1.93	0.49
2:E:936:ILE:HD12	2:E:939:THR:HB	1.95	0.49
2:E:959:ALA:O	2:E:962:GLN:NE2	2.46	0.49
2:E:1154:LYS:HD2	2:E:1157:GLN:NE2	2.27	0.49
2:E:1388:TYR:CE2	3:F:44:VAL:HA	2.47	0.49
2:E:1460:GLN:HG2	2:E:1493:TYR:O	2.13	0.49
3:F:2:GLN:HE22	3:F:4:ILE:HD11	1.78	0.49
2:B:172:ILE:HD12	2:B:175:PRO:HG2	1.94	0.49
2:B:1632:LYS:O	2:B:1636:HIS:N	2.46	0.49
3:C:98:TYR:HE1	3:C:149:ILE:HD13	1.78	0.49
2:E:167:ASP:OD1	2:E:167:ASP:N	2.44	0.49
1:A:680:ASP:OD1	1:A:680:ASP:N	2.45	0.49
2:B:526:HIS:CE1	2:B:586:LEU:HD21	2.48	0.49
2:B:1129:PHE:HA	2:B:1132:MET:HG3	1.94	0.49
2:E:95:LEU:HA	2:E:98:TRP:CD1	2.48	0.49
2:E:257:ASN:O	2:E:488:ALA:N	2.33	0.49
2:E:349:GLN:NE2	2:E:350:GLN:O	2.37	0.49
2:E:664:GLU:OE1	2:E:664:GLU:N	2.34	0.49
2:E:973:ILE:HD13	2:E:976:PHE:HZ	1.78	0.49
2:E:1038:PHE:O	2:E:1039:GLU:HG2	2.13	0.49
2:E:1545:HIS:O	2:E:1549:MET:HG2	2.12	0.49
2:E:1549:MET:HA	3:F:39:ASN:ND2	2.27	0.49
3:F:72:TYR:O	3:F:75:THR:OG1	2.24	0.49
1:A:588:TYR:N	1:A:603:SER:OG	2.46	0.49
2:B:319:ARG:O	2:B:500:VAL:N	2.45	0.49
2:B:1038:PHE:O	2:B:1039:GLU:HG2	2.13	0.49
2:B:1128:PHE:O	2:B:1131:MET:HG2	2.12	0.49
2:B:1386:LYS:HG3	2:B:1387:GLU:H	1.78	0.49
2:E:1386:LYS:HG3	2:E:1387:GLU:H	1.77	0.49
2:E:1632:LYS:O	2:E:1636:HIS:N	2.46	0.49
3:F:98:TYR:HE1	3:F:149:ILE:HD13	1.78	0.49
2:B:102:TRP:CZ3	2:B:118:GLN:HG2	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1054:LEU:HD11	2:B:1080:ARG:HB3	1.94	0.49
2:B:1282:LEU:HD12	2:B:1283:LEU:HD22	1.94	0.49
2:B:1460:GLN:HG2	2:B:1493:TYR:O	2.13	0.49
1:D:541:GLN:O	1:D:544:ILE:HG22	2.12	0.49
2:E:319:ARG:O	2:E:500:VAL:N	2.45	0.49
2:E:1040:LEU:HD22	2:E:1043:TRP:CH2	2.48	0.49
2:E:1358:PRO:HB2	2:E:1387:GLU:HB2	1.95	0.49
2:E:1362:TYR:CE1	2:E:1384:ARG:HG3	2.46	0.49
2:B:936:ILE:HD12	2:B:939:THR:HB	1.95	0.48
2:B:943:MET:HG2	2:B:953:PHE:CD2	2.48	0.48
2:B:1135:GLU:OE1	2:B:1139:SER:OG	2.31	0.48
3:C:7:VAL:HB	3:C:78:PHE:HD2	1.78	0.48
2:E:288:ASP:OD1	2:E:291:ARG:NH2	2.37	0.48
1:A:580:SER:HB2	1:A:585:VAL:HG22	1.95	0.48
2:B:25:VAL:HB	2:B:56:LYS:O	2.13	0.48
2:B:738:ASN:HD21	2:B:793:GLN:HG2	1.78	0.48
2:B:1408:MET:SD	2:B:1425:TYR:HB3	2.53	0.48
2:B:1565:ASN:O	2:B:1568:LYS:HG3	2.13	0.48
1:D:588:TYR:N	1:D:603:SER:OG	2.46	0.48
1:D:726:CYS:SG	1:D:727:ASN:N	2.86	0.48
2:E:7:THR:O	2:E:10:GLN:NE2	2.45	0.48
2:E:652:HIS:CD2	2:E:656:LYS:HD3	2.48	0.48
2:E:1368:TYR:N	2:E:1425:TYR:O	2.42	0.48
2:B:652:HIS:CD2	2:B:656:LYS:HD3	2.48	0.48
2:B:882:LEU:HA	2:B:885:GLN:NE2	2.28	0.48
1:D:665:TRP:O	1:D:669:LEU:HG	2.13	0.48
2:E:1118:VAL:O	2:E:1122:LYS:HG2	2.13	0.48
2:E:1565:ASN:O	2:E:1568:LYS:HG3	2.13	0.48
1:A:562:PHE:N	1:A:575:TRP:O	2.40	0.48
2:B:228:PHE:HA	2:B:401:VAL:HG12	1.96	0.48
2:B:556:ASN:ND2	2:B:561:THR:O	2.47	0.48
2:B:994:LYS:NZ	2:B:1048:HIS:HB3	2.28	0.48
2:E:254:ILE:O	2:E:431:MET:N	2.40	0.48
2:E:700:ILE:O	2:E:704:ILE:HG13	2.12	0.48
2:E:994:LYS:NZ	2:E:1048:HIS:HB3	2.28	0.48
2:E:1176:LEU:HD12	2:E:1177:LEU:N	2.29	0.48
2:B:215:ILE:O	2:B:218:THR:OG1	2.29	0.48
2:B:992:MET:O	2:B:996:LEU:HD23	2.13	0.48
2:B:1345:ARG:HG2	2:B:1349:TYR:CE2	2.49	0.48
3:C:39:ASN:H	3:C:57:ASP:HB3	1.77	0.48
2:E:926:GLN:O	2:E:929:MET:N	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:943:MET:HG2	2:E:953:PHE:CD2	2.48	0.48
2:E:1345:ARG:HG2	2:E:1349:TYR:CE2	2.49	0.48
1:A:646:TYR:CE1	1:A:652:LEU:HG	2.49	0.48
2:B:697:LEU:O	2:B:701:ILE:HG12	2.14	0.48
2:B:1101:PHE:CE2	2:B:1105:MET:HG3	2.49	0.48
2:B:1176:LEU:HD12	2:B:1177:LEU:N	2.29	0.48
2:B:1358:PRO:HB2	2:B:1387:GLU:HB2	1.95	0.48
3:C:80:ILE:HD11	3:C:97:TRP:HB3	1.96	0.48
1:D:536:LEU:HG	1:D:539:LYS:HE3	1.96	0.48
1:D:557:VAL:HA	1:D:579:LEU:HB3	1.96	0.48
1:D:652:LEU:HD22	1:D:654:PHE:CZ	2.49	0.48
2:E:25:VAL:HB	2:E:56:LYS:O	2.13	0.48
2:E:869:PHE:HA	2:E:918:VAL:HG13	1.96	0.48
2:E:1303:GLU:OE1	2:E:1303:GLU:HA	2.14	0.48
2:B:105:LEU:HD21	2:B:113:LEU:HD11	1.96	0.48
2:B:248:PRO:HD2	2:B:293:ARG:HG3	1.94	0.48
2:B:727:THR:O	2:B:774:TYR:HB2	2.14	0.48
2:B:1002:TYR:CE2	2:B:1009:MET:HB3	2.48	0.48
2:B:1307:TYR:CD1	2:B:1310:LYS:HE2	2.49	0.48
1:D:678:MET:HA	1:D:683:ARG:HH12	1.79	0.48
2:E:697:LEU:O	2:E:701:ILE:HG12	2.14	0.48
2:E:738:ASN:HD21	2:E:793:GLN:HG2	1.78	0.48
2:E:950:ILE:O	2:E:954:VAL:HG23	2.13	0.48
3:F:124:ASP:O	3:F:127:GLU:HG2	2.14	0.48
1:A:530:SER:O	1:A:534:LEU:N	2.36	0.48
2:B:95:LEU:HA	2:B:98:TRP:CD1	2.48	0.48
2:B:421:VAL:HG13	2:B:425:THR:HG21	1.96	0.48
2:B:1328:TYR:HB3	2:B:1338:LEU:HD21	1.96	0.48
1:D:580:SER:HB2	1:D:585:VAL:HG22	1.95	0.48
2:E:156:ASN:HB3	2:E:161:LEU:HB2	1.94	0.48
2:E:308:LEU:HG	2:E:320:ARG:HH22	1.78	0.48
2:E:526:HIS:CE1	2:E:586:LEU:HD21	2.48	0.48
2:E:992:MET:O	2:E:996:LEU:HD23	2.13	0.48
2:E:1301:TYR:O	2:E:1305:ILE:HG12	2.14	0.48
2:E:1408:MET:SD	2:E:1425:TYR:HB3	2.53	0.48
1:A:665:TRP:O	1:A:669:LEU:HG	2.13	0.48
1:A:678:MET:HA	1:A:683:ARG:HH12	1.79	0.48
2:B:1118:VAL:O	2:B:1122:LYS:HG2	2.13	0.48
2:B:1346:ALA:HB1	2:E:1339:GLY:HA2	1.96	0.48
2:B:1370:GLN:N	2:B:1421:SER:O	2.47	0.48
2:B:1607:HIS:NE2	2:B:1619:HIS:HB2	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1633:VAL:O	2:B:1639:VAL:HG22	2.13	0.48
3:C:45:MET:HA	3:C:50:PRO:HA	1.96	0.48
3:C:124:ASP:O	3:C:127:GLU:HG2	2.14	0.48
2:E:181:ILE:HD11	2:E:956:CYS:HA	1.95	0.48
2:E:248:PRO:HD2	2:E:293:ARG:HG3	1.94	0.48
2:E:450:LEU:O	2:E:510:TYR:N	2.45	0.48
2:E:1101:PHE:CE2	2:E:1105:MET:HG3	2.49	0.48
2:E:1607:HIS:NE2	2:E:1619:HIS:HB2	2.29	0.48
3:F:39:ASN:H	3:F:57:ASP:HB3	1.77	0.48
1:A:536:LEU:HG	1:A:539:LYS:HE3	1.96	0.48
2:B:103:ARG:HA	2:B:106:TYR:CE1	2.46	0.48
2:B:1417:ASP:N	2:B:1417:ASP:OD1	2.43	0.48
2:E:421:VAL:HG13	2:E:425:THR:HG21	1.96	0.48
2:E:1002:TYR:CE2	2:E:1009:MET:HB3	2.48	0.48
2:E:1282:LEU:HD12	2:E:1283:LEU:HD22	1.94	0.48
3:F:7:VAL:HB	3:F:78:PHE:HD2	1.78	0.48
1:A:652:LEU:HD22	1:A:654:PHE:CZ	2.49	0.47
2:B:950:ILE:O	2:B:954:VAL:HG23	2.13	0.47
2:B:1303:GLU:OE1	2:B:1303:GLU:HA	2.14	0.47
2:B:1524:LEU:HA	2:B:1527:GLU:OE2	2.14	0.47
1:D:536:LEU:CD2	2:E:31:ILE:HD11	2.43	0.47
2:E:102:TRP:CZ3	2:E:118:GLN:HG2	2.48	0.47
2:E:228:PHE:HA	2:E:401:VAL:HG12	1.96	0.47
2:E:1516:GLU:O	2:E:1520:GLU:OE1	2.32	0.47
1:A:726:CYS:SG	1:A:727:ASN:N	2.86	0.47
2:B:287:MET:SD	2:B:291:ARG:NH2	2.88	0.47
2:B:642:ASN:HA	2:B:644:ARG:HH22	1.79	0.47
2:B:869:PHE:HA	2:B:918:VAL:HG13	1.96	0.47
2:B:1469:ARG:HD2	2:B:1481:THR:OG1	2.14	0.47
3:C:120:ARG:NH2	3:C:139:TYR:H	2.12	0.47
2:E:556:ASN:ND2	2:E:561:THR:O	2.47	0.47
2:E:1516:GLU:O	2:E:1519:ILE:HB	2.14	0.47
2:B:327:MET:HB2	2:B:346:ILE:HG23	1.97	0.47
2:B:450:LEU:O	2:B:510:TYR:N	2.45	0.47
2:B:926:GLN:O	2:B:929:MET:N	2.47	0.47
2:E:105:LEU:HD21	2:E:113:LEU:HD11	1.96	0.47
2:E:757:LEU:O	2:E:760:LEU:HD22	2.14	0.47
3:F:137:ILE:HG23	3:F:141:GLN:HG3	1.96	0.47
2:B:59:PHE:HD2	2:B:64:ILE:HG12	1.79	0.47
2:B:87:LEU:O	2:B:90:GLU:HG3	2.14	0.47
2:B:147:LYS:O	2:B:151:LYS:HG2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:166:ARG:NH1	2:B:168:ASP:H	2.13	0.47
2:B:651:LYS:HB3	2:B:689:TYR:CE1	2.49	0.47
2:B:741:VAL:HG21	2:B:798:PHE:HD1	1.80	0.47
2:B:1144:PHE:HB2	2:B:1147:PHE:HB3	1.96	0.47
2:B:1563:PHE:O	2:B:1567:GLU:HG2	2.15	0.47
1:D:541:GLN:N	1:D:542:PRO:HD3	2.30	0.47
1:D:646:TYR:CE1	1:D:652:LEU:HG	2.49	0.47
2:E:87:LEU:O	2:E:90:GLU:HG3	2.14	0.47
2:E:92:THR:HA	2:E:95:LEU:HD12	1.97	0.47
2:E:285:SER:N	2:E:288:ASP:OD2	2.40	0.47
2:E:651:LYS:HB3	2:E:689:TYR:CE1	2.49	0.47
2:E:1633:VAL:O	2:E:1639:VAL:HG22	2.13	0.47
3:F:45:MET:HA	3:F:50:PRO:HA	1.96	0.47
3:F:120:ARG:NH2	3:F:139:TYR:H	2.12	0.47
2:B:166:ARG:HG2	2:B:173:LEU:HB2	1.96	0.47
2:B:905:LEU:O	2:B:909:ILE:HG12	2.15	0.47
2:B:1574:LYS:HA	2:B:1577:GLN:OE1	2.15	0.47
3:C:91:GLU:O	3:C:95:ALA:CB	2.63	0.47
2:E:59:PHE:HD2	2:E:64:ILE:HG12	1.80	0.47
2:E:166:ARG:HG2	2:E:173:LEU:HB2	1.96	0.47
2:E:287:MET:SD	2:E:291:ARG:NH2	2.88	0.47
2:E:882:LEU:HA	2:E:885:GLN:NE2	2.28	0.47
2:E:1144:PHE:HB2	2:E:1147:PHE:HB3	1.96	0.47
2:E:1328:TYR:HB3	2:E:1338:LEU:HD21	1.96	0.47
2:B:922:ALA:HA	2:B:925:ILE:HD12	1.97	0.47
3:C:137:ILE:HG23	3:C:141:GLN:HG3	1.96	0.47
1:D:532:PRO:O	1:D:536:LEU:HD13	2.15	0.47
1:D:544:ILE:CD1	1:D:689:LEU:HB2	2.44	0.47
1:D:696:LEU:HD12	1:D:697:ARG:HD2	1.97	0.47
2:E:1307:TYR:CD1	2:E:1310:LYS:HE2	2.49	0.47
2:E:1469:ARG:HD2	2:E:1481:THR:OG1	2.14	0.47
3:F:9:VAL:HG13	3:F:78:PHE:CE2	2.50	0.47
3:F:80:ILE:HD11	3:F:97:TRP:HB3	1.96	0.47
1:A:532:PRO:O	1:A:536:LEU:HD13	2.15	0.47
2:B:89:GLN:O	2:B:92:THR:OG1	2.31	0.47
2:B:119:GLN:HA	2:B:122:TYR:CD1	2.50	0.47
2:B:185:LYS:HB2	2:B:185:LYS:HE3	1.57	0.47
2:B:259:LEU:HD23	2:B:490:TYR:CG	2.49	0.47
2:B:466:VAL:HG22	2:B:547:PHE:HZ	1.79	0.47
2:B:940:VAL:HG22	2:B:992:MET:HE3	1.96	0.47
2:B:1097:HIS:HA	2:B:1100:LYS:NZ	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1125:ILE:N	2:B:1126:PRO:HD2	2.30	0.47
2:B:1361:GLU:OE2	2:B:1388:TYR:HA	2.15	0.47
1:D:547:LEU:HG	2:E:106:TYR:OH	2.14	0.47
1:D:564:LYS:H	1:D:573:LYS:HD2	1.78	0.47
1:D:622:CYS:HB3	1:D:624:HIS:ND1	2.30	0.47
2:E:36:HIS:N	2:E:48:TYR:O	2.48	0.47
2:E:166:ARG:NH1	2:E:168:ASP:H	2.13	0.47
2:E:965:ASP:O	2:E:968:HIS:HB2	2.14	0.47
2:E:1183:HIS:HB3	2:E:1187:SER:OG	2.15	0.47
2:E:1370:GLN:N	2:E:1421:SER:O	2.47	0.47
2:E:1463:ARG:HD3	2:E:1486:ARG:HD2	1.97	0.47
2:E:1577:GLN:HA	2:E:1580:PRO:HG3	1.97	0.47
2:B:88:VAL:O	2:B:91:LEU:HG	2.15	0.47
2:B:181:ILE:HD11	2:B:956:CYS:HA	1.95	0.47
2:B:757:LEU:O	2:B:760:LEU:HD22	2.14	0.47
2:B:1627:ARG:HA	2:B:1630:LYS:HB2	1.96	0.47
1:D:640:LEU:HB3	1:D:656:ALA:H	1.80	0.47
2:E:105:LEU:HD23	2:E:110:LYS:HD2	1.96	0.47
2:E:147:LYS:O	2:E:151:LYS:HG2	2.14	0.47
2:E:741:VAL:HG21	2:E:798:PHE:HD1	1.80	0.47
2:E:844:ILE:HG21	2:E:881:LEU:HD21	1.96	0.47
2:E:1135:GLU:OE1	2:E:1139:SER:OG	2.31	0.47
2:E:1627:ARG:HA	2:E:1630:LYS:HB2	1.96	0.47
2:B:25:VAL:HG12	2:B:55:LYS:HE2	1.97	0.47
2:B:149:THR:HA	2:B:152:ILE:HG22	1.97	0.47
2:B:927:LEU:CB	2:B:931:ARG:HH21	2.25	0.47
2:B:1516:GLU:O	2:B:1519:ILE:HB	2.15	0.47
2:E:642:ASN:HA	2:E:644:ARG:HH22	1.79	0.47
2:E:926:GLN:O	2:E:929:MET:HB3	2.15	0.47
3:F:91:GLU:O	3:F:95:ALA:CB	2.63	0.47
2:B:288:ASP:OD1	2:B:291:ARG:NH2	2.37	0.47
2:B:469:THR:O	2:B:530:THR:OG1	2.31	0.47
2:B:926:GLN:O	2:B:929:MET:HB3	2.15	0.47
2:B:965:ASP:O	2:B:968:HIS:HB2	2.14	0.47
2:B:1224:THR:HA	2:B:1227:VAL:HG12	1.97	0.47
2:B:1240:TYR:O	2:B:1244:LEU:HG	2.15	0.47
2:B:1516:GLU:O	2:B:1520:GLU:OE1	2.32	0.47
2:B:1613:GLU:OE2	2:B:1614:GLN:HG3	2.14	0.47
3:C:93:VAL:O	3:C:98:TYR:HB3	2.15	0.47
2:E:88:VAL:O	2:E:91:LEU:HG	2.15	0.47
2:E:871:GLN:OE1	2:E:875:ARG:NH1	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:1059:LEU:HD23	2:E:1062:GLU:OE1	2.15	0.47
2:E:1524:LEU:HA	2:E:1527:GLU:OE2	2.14	0.47
1:A:557:VAL:HA	1:A:579:LEU:HB3	1.96	0.46
1:A:696:LEU:HD12	1:A:697:ARG:HD2	1.97	0.46
2:B:36:HIS:N	2:B:48:TYR:O	2.48	0.46
2:B:288:ASP:HA	2:B:291:ARG:NE	2.30	0.46
2:B:1183:HIS:HB3	2:B:1187:SER:OG	2.15	0.46
2:B:1231:TYR:CE2	2:B:1239:ILE:HD12	2.50	0.46
2:B:1388:TYR:HH	2:B:1390:ARG:NH1	2.13	0.46
2:B:1521:THR:O	2:B:1524:LEU:HG	2.15	0.46
1:D:575:TRP:HB2	1:D:589:GLY:O	2.15	0.46
2:E:319:ARG:NH1	2:E:511:GLU:OE2	2.39	0.46
2:E:466:VAL:HG22	2:E:547:PHE:HZ	1.79	0.46
2:E:727:THR:O	2:E:774:TYR:HB2	2.14	0.46
2:E:1097:HIS:HA	2:E:1100:LYS:NZ	2.30	0.46
2:E:1521:THR:O	2:E:1524:LEU:HG	2.15	0.46
2:E:1563:PHE:O	2:E:1567:GLU:HG2	2.15	0.46
2:B:484:ILE:HD12	2:B:495:GLU:HA	1.97	0.46
2:B:643:TRP:HB2	2:B:650:ILE:CD1	2.45	0.46
2:B:710:GLN:HE21	2:B:711:HIS:CE1	2.33	0.46
2:B:973:ILE:HD13	2:B:976:PHE:HZ	1.78	0.46
2:B:1059:LEU:HD23	2:B:1062:GLU:OE1	2.15	0.46
3:C:39:ASN:OD1	3:C:56:TRP:HA	2.16	0.46
2:E:10:GLN:NE2	2:E:37:ILE:O	2.46	0.46
2:E:136:LEU:HD12	2:E:140:GLU:HG2	1.97	0.46
2:E:163:LEU:HD23	2:E:163:LEU:H	1.79	0.46
2:E:259:LEU:HD23	2:E:490:TYR:CG	2.49	0.46
2:E:339:ASP:N	2:E:339:ASP:OD1	2.48	0.46
2:E:875:ARG:HE	2:E:924:HIS:CD2	2.33	0.46
2:E:1335:TYR:O	2:E:1338:LEU:HB2	2.15	0.46
2:E:1399:LEU:HD11	2:E:1407:LYS:HE3	1.97	0.46
2:E:1434:VAL:HB	2:E:1461:GLN:HB2	1.97	0.46
2:E:1613:GLU:OE2	2:E:1614:GLN:HG3	2.14	0.46
1:A:622:CYS:HB3	1:A:624:HIS:ND1	2.30	0.46
2:B:35:VAL:HG23	2:B:37:ILE:HG13	1.97	0.46
2:B:319:ARG:NH1	2:B:511:GLU:OE2	2.39	0.46
2:B:630:LYS:HG2	2:B:668:PHE:HZ	1.80	0.46
1:D:647:ASP:OD1	3:F:163:ARG:NH2	2.49	0.46
2:E:327:MET:HB2	2:E:346:ILE:HG23	1.97	0.46
2:E:584:PHE:CE2	2:E:588:LEU:HD11	2.50	0.46
2:E:1354:LYS:HE3	2:E:1354:LYS:HB3	1.73	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:1574:LYS:HA	2:E:1577:GLN:OE1	2.15	0.46
1:A:544:ILE:CD1	1:A:689:LEU:HB2	2.45	0.46
2:B:307:GLU:HB2	2:B:314:HIS:CD2	2.51	0.46
2:B:647:SER:HA	2:B:650:ILE:HG13	1.97	0.46
2:B:844:ILE:HG21	2:B:881:LEU:HD21	1.96	0.46
2:B:943:MET:HG3	2:B:950:ILE:HD13	1.98	0.46
2:B:973:ILE:HA	2:B:976:PHE:CE1	2.51	0.46
3:C:9:VAL:HG13	3:C:78:PHE:CE2	2.50	0.46
2:E:119:GLN:HA	2:E:122:TYR:CD1	2.50	0.46
2:E:149:THR:HA	2:E:152:ILE:HG22	1.97	0.46
2:E:307:GLU:HB2	2:E:314:HIS:CD2	2.51	0.46
2:E:414:GLN:NE2	2:E:421:VAL:HG12	2.24	0.46
2:E:710:GLN:HE21	2:E:711:HIS:CE1	2.33	0.46
2:E:1231:TYR:CE2	2:E:1239:ILE:HD12	2.50	0.46
1:A:541:GLN:N	1:A:542:PRO:HD3	2.30	0.46
2:B:92:THR:HA	2:B:95:LEU:HD12	1.97	0.46
2:B:246:TYR:CZ	2:B:383:LEU:HD21	2.50	0.46
2:B:862:LYS:O	2:B:865:GLU:HB3	2.16	0.46
2:B:1335:TYR:O	2:B:1338:LEU:HB2	2.15	0.46
2:B:1343:LYS:HE2	2:E:1343:LYS:HD3	1.98	0.46
2:B:1434:VAL:HB	2:B:1461:GLN:HB2	1.97	0.46
2:E:985:PHE:HA	2:E:988:GLU:OE1	2.16	0.46
2:E:1027:VAL:HG12	2:E:1030:ARG:HH21	1.81	0.46
2:E:1469:ARG:HA	2:E:1481:THR:HB	1.98	0.46
2:B:163:LEU:HD23	2:B:163:LEU:H	1.79	0.46
2:B:718:THR:O	2:B:722:LYS:HE2	2.16	0.46
2:B:985:PHE:HA	2:B:988:GLU:OE1	2.16	0.46
2:B:1573:GLU:HG3	2:B:1577:GLN:NE2	2.31	0.46
3:C:5:LYS:HD2	3:C:74:GLN:O	2.16	0.46
2:E:484:ILE:HD12	2:E:495:GLU:HA	1.97	0.46
2:E:569:LEU:HD23	2:E:591:THR:HG22	1.98	0.46
2:E:1499:LEU:HG	2:E:1501:TRP:H	1.81	0.46
2:E:1623:SER:HB3	2:E:1627:ARG:NH2	2.31	0.46
1:A:575:TRP:HB2	1:A:589:GLY:O	2.15	0.46
1:A:700:ASP:CG	2:B:14:VAL:HG13	2.36	0.46
2:B:1030:ARG:HG3	2:B:1031:PHE:CE1	2.51	0.46
2:B:1220:ARG:HA	2:B:1223:CYS:SG	2.56	0.46
2:B:1301:TYR:O	2:B:1305:ILE:HG12	2.14	0.46
2:B:1362:TYR:CE1	2:B:1384:ARG:HG3	2.46	0.46
1:D:576:TYR:OH	1:D:601:HIS:O	2.34	0.46
1:D:614:LYS:HZ1	1:D:648:SER:H	1.64	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:215:ILE:O	2:E:218:THR:OG1	2.29	0.46
2:E:945:ARG:NH1	2:E:947:SER:H	2.13	0.46
2:E:1189:SER:O	2:E:1192:VAL:HG22	2.16	0.46
2:E:1240:TYR:O	2:E:1244:LEU:HG	2.15	0.46
2:E:1259:GLU:HG3	2:E:1497:GLY:O	2.16	0.46
2:E:1318:ILE:HD11	2:E:1348:PHE:HB2	1.98	0.46
3:F:93:VAL:O	3:F:98:TYR:HB3	2.15	0.46
2:B:1463:ARG:HD3	2:B:1486:ARG:HD2	1.97	0.46
3:C:129:LEU:O	3:C:134:LEU:N	2.40	0.46
2:E:643:TRP:HB2	2:E:650:ILE:CD1	2.45	0.46
2:E:922:ALA:HA	2:E:925:ILE:HD12	1.97	0.46
2:E:940:VAL:HG22	2:E:992:MET:HE3	1.97	0.46
2:E:1237:GLU:O	2:E:1240:TYR:HB3	2.15	0.46
2:E:1328:TYR:HB3	2:E:1338:LEU:CD2	2.46	0.46
2:E:1361:GLU:OE2	2:E:1388:TYR:HA	2.15	0.46
1:A:660:HIS:CG	1:A:661:GLU:N	2.84	0.46
2:B:306:MET:HE1	2:B:534:ARG:O	2.16	0.46
2:B:985:PHE:O	2:B:989:THR:HG23	2.16	0.46
2:B:1119:GLU:HG2	2:B:1120:LEU:N	2.31	0.46
3:C:164:GLY:O	3:C:168:VAL:N	2.34	0.46
1:D:640:LEU:O	1:D:655:ILE:HA	2.16	0.46
2:E:288:ASP:HA	2:E:291:ARG:NE	2.30	0.46
2:E:306:MET:HE1	2:E:534:ARG:O	2.15	0.46
2:E:732:LYS:O	2:E:736:VAL:HG23	2.16	0.46
2:E:792:ARG:HH21	2:E:839:LEU:HD13	1.81	0.46
2:E:977:LYS:HZ3	2:E:981:ASP:HB2	1.81	0.46
2:E:1125:ILE:N	2:E:1126:PRO:HD2	2.30	0.46
3:F:129:LEU:O	3:F:134:LEU:N	2.40	0.46
2:B:285:SER:N	2:B:288:ASP:OD2	2.40	0.46
2:B:330:THR:HG22	2:B:334:HIS:CE1	2.52	0.46
2:B:528:ARG:HD3	2:B:585:TYR:CZ	2.51	0.46
2:B:732:LYS:O	2:B:736:VAL:HG23	2.16	0.46
2:E:528:ARG:HD3	2:E:585:TYR:CZ	2.51	0.46
2:E:1600:LEU:O	2:E:1604:ILE:HG12	2.16	0.46
1:A:607:LYS:HE3	1:A:609:PRO:HA	1.98	0.45
2:B:85:LEU:HB3	2:B:89:GLN:HE22	1.81	0.45
2:B:146:LYS:HB2	2:B:146:LYS:HE2	1.80	0.45
2:B:296:LEU:HB2	2:B:329:ILE:HD13	1.98	0.45
2:B:875:ARG:HE	2:B:924:HIS:CD2	2.33	0.45
2:B:1081:LYS:HA	2:B:1120:LEU:HD23	1.98	0.45
2:B:1328:TYR:HB3	2:B:1338:LEU:CD2	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:111:LEU:HA	2:E:114:PHE:HB3	1.97	0.45
2:E:146:LYS:HB2	2:E:146:LYS:HE2	1.81	0.45
2:E:429:ARG:NE	2:E:445:ASP:OD2	2.46	0.45
2:E:905:LEU:O	2:E:909:ILE:HG12	2.15	0.45
2:E:972:TYR:HA	2:E:975:THR:OG1	2.16	0.45
3:F:39:ASN:OD1	3:F:56:TRP:HA	2.16	0.45
3:F:98:TYR:CE1	3:F:149:ILE:HD13	2.51	0.45
1:A:544:ILE:HD11	1:A:689:LEU:HB2	1.99	0.45
1:A:640:LEU:HB3	1:A:656:ALA:H	1.80	0.45
2:B:105:LEU:HD23	2:B:110:LYS:HD2	1.96	0.45
2:B:339:ASP:OD1	2:B:339:ASP:N	2.48	0.45
2:B:349:GLN:NE2	2:B:350:GLN:O	2.37	0.45
2:B:760:LEU:HD22	2:B:819:TYR:HB3	1.98	0.45
2:B:1023:GLN:O	2:B:1027:VAL:HG13	2.17	0.45
2:B:1189:SER:O	2:B:1192:VAL:HG22	2.16	0.45
2:B:1237:GLU:O	2:B:1240:TYR:HB3	2.16	0.45
2:E:718:THR:O	2:E:722:LYS:HE2	2.16	0.45
2:E:760:LEU:HD22	2:E:819:TYR:HB3	1.98	0.45
2:E:1484:ILE:HG22	2:E:1486:ARG:HG3	1.98	0.45
3:F:5:LYS:HD2	3:F:74:GLN:O	2.16	0.45
2:B:569:LEU:HD23	2:B:591:THR:HG22	1.97	0.45
2:B:792:ARG:HH21	2:B:839:LEU:HD13	1.81	0.45
2:B:1075:LYS:HB3	2:B:1075:LYS:HE3	1.60	0.45
2:B:1577:GLN:HA	2:B:1580:PRO:HG3	1.97	0.45
2:B:1623:SER:HB3	2:B:1627:ARG:NH2	2.31	0.45
3:C:98:TYR:CE1	3:C:149:ILE:HD13	2.51	0.45
3:C:174:ARG:HA	3:C:177:LEU:HB2	1.99	0.45
2:E:85:LEU:HB3	2:E:89:GLN:HE22	1.81	0.45
2:E:185:LYS:HB2	2:E:185:LYS:HE3	1.57	0.45
2:E:548:GLY:HA2	2:E:572:TYR:O	2.16	0.45
2:E:640:LEU:HD22	2:E:657:LEU:HD22	1.98	0.45
2:E:647:SER:HA	2:E:650:ILE:HG13	1.97	0.45
2:E:741:VAL:HG21	2:E:798:PHE:CD1	2.52	0.45
2:E:862:LYS:O	2:E:865:GLU:HB3	2.16	0.45
2:E:1224:THR:HA	2:E:1227:VAL:HG12	1.97	0.45
2:B:111:LEU:HA	2:B:114:PHE:HB3	1.97	0.45
2:B:654:LEU:HB3	2:B:692:LEU:HB3	1.97	0.45
2:B:1469:ARG:HA	2:B:1481:THR:HB	1.98	0.45
2:E:25:VAL:HG12	2:E:55:LYS:HE2	1.97	0.45
2:E:103:ARG:HA	2:E:106:TYR:CE1	2.46	0.45
2:E:246:TYR:CZ	2:E:383:LEU:HD21	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:943:MET:HG3	2:E:950:ILE:HD13	1.98	0.45
2:E:985:PHE:O	2:E:989:THR:HG23	2.16	0.45
2:E:1075:LYS:HE3	2:E:1075:LYS:HB3	1.60	0.45
2:E:1354:LYS:NZ	2:E:1355:ALA:HB2	2.31	0.45
2:E:1412:THR:HB	2:E:1413:PRO:HD3	1.98	0.45
2:E:1460:GLN:HE21	2:E:1494:THR:HG23	1.81	0.45
2:E:1573:GLU:HG3	2:E:1577:GLN:NE2	2.31	0.45
3:F:170:ASP:HB3	3:F:174:ARG:NH2	2.29	0.45
1:A:564:LYS:HE2	1:A:575:TRP:CD1	2.52	0.45
1:A:576:TYR:OH	1:A:601:HIS:O	2.34	0.45
2:B:538:GLU:OE1	2:B:542:LYS:NZ	2.38	0.45
2:B:1412:THR:HB	2:B:1413:PRO:HD3	1.97	0.45
2:E:973:ILE:HA	2:E:976:PHE:CE1	2.51	0.45
2:E:1030:ARG:HG3	2:E:1031:PHE:CE1	2.51	0.45
1:A:679:SER:HB3	1:A:681:LEU:HG	1.99	0.45
2:B:225:TYR:N	2:B:404:LYS:O	2.40	0.45
2:B:468:VAL:HG21	2:B:620:PHE:CZ	2.52	0.45
2:B:584:PHE:CE2	2:B:588:LEU:HD11	2.50	0.45
2:B:741:VAL:HG21	2:B:798:PHE:CD1	2.52	0.45
2:B:945:ARG:NH1	2:B:947:SER:H	2.13	0.45
2:B:972:TYR:HA	2:B:975:THR:OG1	2.16	0.45
2:B:1149:ASN:HA	2:B:1236:ARG:NH2	2.32	0.45
2:B:1248:ARG:HG3	2:B:1264:LEU:CD1	2.45	0.45
2:B:1399:LEU:HD11	2:B:1407:LYS:HE3	1.97	0.45
2:B:1605:ARG:O	2:B:1609:GLU:HG3	2.17	0.45
1:D:544:ILE:HD11	1:D:689:LEU:HB2	1.98	0.45
1:D:660:HIS:CG	1:D:661:GLU:N	2.84	0.45
1:D:679:SER:HB3	1:D:681:LEU:HG	1.99	0.45
2:E:719:TYR:CD1	2:E:723:HIS:HB2	2.51	0.45
2:E:1066:GLN:HA	2:E:1069:ARG:CZ	2.47	0.45
2:E:1166:GLU:O	2:E:1169:LYS:HG2	2.17	0.45
1:A:574:PHE:HB2	1:A:593:GLU:HA	1.99	0.45
2:B:414:GLN:NE2	2:B:421:VAL:HG12	2.25	0.45
2:B:673:LEU:HB3	2:B:677:PHE:CE2	2.52	0.45
2:B:809:ALA:O	2:B:813:LYS:HD3	2.16	0.45
2:B:1381:PHE:CE1	2:B:1503:GLU:HB3	2.52	0.45
2:B:1550:LEU:O	2:B:1554:ILE:HG12	2.17	0.45
1:D:530:SER:O	1:D:534:LEU:N	2.36	0.45
1:D:564:LYS:HE2	1:D:575:TRP:CD1	2.52	0.45
2:E:694:PHE:CZ	2:E:737:LEU:HB3	2.51	0.45
2:E:1526:ASN:HA	2:E:1529:ILE:HD12	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:1549:MET:SD	3:F:39:ASN:OD1	2.75	0.45
3:F:174:ARG:HA	3:F:177:LEU:HB2	1.99	0.45
2:B:792:ARG:HE	2:B:839:LEU:HD11	1.82	0.45
2:E:283:ASP:HB2	2:E:430:LYS:HB3	1.99	0.45
2:B:965:ASP:HA	2:B:1019:ARG:HH21	1.82	0.45
2:B:1154:LYS:HD2	2:B:1157:GLN:NE2	2.27	0.45
2:E:809:ALA:O	2:E:813:LYS:HD3	2.16	0.45
2:E:1156:ASP:OD2	2:E:1243:TYR:OH	2.35	0.45
2:E:1388:TYR:OH	3:F:44:VAL:HG22	2.17	0.45
1:A:546:GLU:HB2	1:A:550:GLN:HE22	1.82	0.45
2:B:72:GLU:O	2:B:76:GLN:NE2	2.49	0.45
2:B:136:LEU:HD12	2:B:140:GLU:HG2	1.97	0.45
2:B:676:LEU:HD22	2:B:693:VAL:HG22	1.99	0.45
2:B:1600:LEU:O	2:B:1604:ILE:HG12	2.16	0.45
2:E:1119:GLU:HG2	2:E:1120:LEU:N	2.31	0.45
2:E:1345:ARG:HG2	2:E:1349:TYR:HE2	1.82	0.45
2:E:1471:GLY:O	2:E:1473:LYS:NZ	2.33	0.45
3:F:43:ASN:HA	3:F:52:ASN:HA	1.99	0.45
1:A:700:ASP:HB2	2:B:32:GLY:HA2	1.99	0.44
1:A:701:LEU:HD21	2:B:16:ILE:HA	1.98	0.44
2:B:719:TYR:CD1	2:B:723:HIS:HB2	2.51	0.44
2:B:757:LEU:HD21	2:B:816:ALA:N	2.33	0.44
2:B:932:LEU:H	2:B:935:ARG:HH21	1.62	0.44
2:B:993:PHE:O	2:B:997:ILE:HG22	2.17	0.44
2:B:1027:VAL:HG12	2:B:1030:ARG:HH21	1.81	0.44
2:B:1168:TYR:CZ	2:B:1172:LEU:HD11	2.53	0.44
2:B:1354:LYS:NZ	2:B:1355:ALA:HB2	2.31	0.44
2:B:1388:TYR:OH	3:C:44:VAL:HG22	2.18	0.44
2:B:1607:HIS:O	2:B:1611:LEU:N	2.50	0.44
3:C:170:ASP:HB3	3:C:174:ARG:NH2	2.29	0.44
2:E:330:THR:HG22	2:E:334:HIS:CE1	2.51	0.44
2:E:932:LEU:H	2:E:935:ARG:HH21	1.62	0.44
2:E:1220:ARG:HA	2:E:1223:CYS:SG	2.56	0.44
2:E:1381:PHE:CE1	2:E:1503:GLU:HB3	2.52	0.44
2:E:1605:ARG:O	2:E:1609:GLU:HG3	2.17	0.44
3:F:82:PHE:HD1	3:F:112:LEU:HD11	1.81	0.44
1:A:591:LEU:HD11	1:A:601:HIS:CE1	2.53	0.44
2:B:144:LEU:HD22	2:B:147:LYS:HZ3	1.82	0.44
2:B:704:ILE:HA	2:B:709:PHE:HB2	1.99	0.44
2:B:940:VAL:HA	2:B:943:MET:HB3	1.98	0.44
2:B:1259:GLU:HG3	2:B:1497:GLY:O	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:35:VAL:HG23	2:E:37:ILE:HG13	1.97	0.44
2:E:468:VAL:HG21	2:E:620:PHE:CZ	2.52	0.44
2:E:654:LEU:HB3	2:E:692:LEU:HB3	1.97	0.44
2:E:704:ILE:HA	2:E:709:PHE:HB2	1.99	0.44
2:E:940:VAL:HA	2:E:943:MET:HB3	1.98	0.44
2:E:965:ASP:HA	2:E:1019:ARG:HH21	1.82	0.44
2:B:140:GLU:O	2:B:144:LEU:HD23	2.18	0.44
2:B:1167:GLN:H	2:B:1167:GLN:CD	2.20	0.44
2:B:1179:HIS:O	2:B:1182:LYS:HG2	2.17	0.44
2:B:1220:ARG:HE	2:B:1250:LEU:CD2	2.31	0.44
2:B:1318:ILE:HD11	2:B:1348:PHE:HB2	1.98	0.44
2:E:1149:ASN:HA	2:E:1236:ARG:NH2	2.32	0.44
2:E:1167:GLN:CD	2:E:1167:GLN:H	2.20	0.44
2:E:1220:ARG:HE	2:E:1250:LEU:CD2	2.31	0.44
2:E:1343:LYS:HE3	2:E:1343:LYS:HB2	1.76	0.44
2:E:1484:ILE:HB	2:E:1512:ILE:HB	1.99	0.44
2:B:678:ASN:O	2:B:682:GLU:HG2	2.17	0.44
2:B:879:LEU:CD2	2:B:931:ARG:HH22	2.31	0.44
2:B:1156:ASP:OD2	2:B:1243:TYR:OH	2.35	0.44
2:B:1354:LYS:HE3	2:B:1354:LYS:HB3	1.73	0.44
2:B:1484:ILE:HB	2:B:1512:ILE:HB	1.99	0.44
2:B:1484:ILE:HG22	2:B:1486:ARG:HG3	1.98	0.44
2:B:1611:LEU:HD13	2:B:1619:HIS:HB2	1.99	0.44
1:D:574:PHE:HB2	1:D:593:GLU:HA	1.99	0.44
2:E:469:THR:O	2:E:530:THR:OG1	2.31	0.44
2:E:792:ARG:HE	2:E:839:LEU:HD11	1.82	0.44
2:E:965:ASP:H	2:E:968:HIS:HB2	1.83	0.44
2:E:1124:THR:HG23	2:E:1127:ILE:HD12	1.99	0.44
2:E:1221:MET:HA	2:E:1224:THR:HG22	1.99	0.44
2:E:1550:LEU:O	2:E:1554:ILE:HG12	2.17	0.44
2:E:1611:LEU:HD13	2:E:1619:HIS:HB2	1.99	0.44
2:B:228:PHE:HE2	2:B:399:LEU:HD12	1.83	0.44
2:B:328:ASP:OD1	2:B:328:ASP:N	2.51	0.44
2:B:1306:SER:HB3	2:B:1310:LYS:HZ1	1.83	0.44
2:B:1557:PRO:HB2	2:B:1560:MET:O	2.17	0.44
1:D:670:ASN:OD1	1:D:675:LYS:HE3	2.18	0.44
2:E:155:GLY:O	2:E:159:LEU:HG	2.18	0.44
2:E:630:LYS:HG2	2:E:668:PHE:HZ	1.81	0.44
2:E:673:LEU:HB3	2:E:677:PHE:CE2	2.52	0.44
2:E:876:GLU:HG2	2:E:877:VAL:HG13	1.99	0.44
2:E:1362:TYR:HD2	2:E:1462:PHE:CE2	2.34	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:1432:LYS:HB3	2:E:1432:LYS:HE3	1.90	0.44
3:F:67:LEU:HD13	3:F:67:LEU:HA	1.74	0.44
2:B:283:ASP:HB2	2:B:430:LYS:HB3	1.99	0.44
2:B:333:ILE:O	2:B:405:LEU:HD22	2.18	0.44
2:B:548:GLY:HA2	2:B:572:TYR:O	2.16	0.44
2:B:630:LYS:HG2	2:B:668:PHE:CZ	2.53	0.44
2:B:640:LEU:HD22	2:B:657:LEU:HD22	1.98	0.44
2:B:909:ILE:HG13	2:B:910:LEU:N	2.33	0.44
2:B:1124:THR:HG23	2:B:1127:ILE:HD12	1.99	0.44
2:B:1166:GLU:O	2:B:1169:LYS:HG2	2.17	0.44
2:B:1538:TRP:CE2	2:B:1539:ASP:HB2	2.53	0.44
2:B:1558:ALA:HB3	3:C:38:ASP:OD2	2.17	0.44
1:D:607:LYS:HE3	1:D:609:PRO:HA	1.98	0.44
2:E:89:GLN:O	2:E:92:THR:OG1	2.31	0.44
2:E:584:PHE:O	2:E:587:THR:OG1	2.26	0.44
2:B:174:ASP:O	2:B:183:LEU:HD21	2.17	0.44
2:B:243:MET:O	2:B:258:TYR:N	2.32	0.44
2:B:1066:GLN:HA	2:B:1069:ARG:CZ	2.47	0.44
2:B:1526:ASN:HA	2:B:1529:ILE:HD12	1.99	0.44
3:C:82:PHE:HD1	3:C:112:LEU:HD11	1.81	0.44
2:E:174:ASP:O	2:E:183:LEU:HD21	2.17	0.44
2:E:630:LYS:HG2	2:E:668:PHE:CZ	2.53	0.44
2:E:879:LEU:CD2	2:E:931:ARG:HH22	2.31	0.44
2:E:1081:LYS:HA	2:E:1120:LEU:HD23	1.98	0.44
2:E:1133:GLN:OE1	2:E:1136:PHE:HD2	2.01	0.44
2:E:1168:TYR:CZ	2:E:1172:LEU:HD11	2.53	0.44
1:A:539:LYS:NZ	1:A:540:ILE:HD11	2.33	0.44
2:B:562:LEU:O	2:B:633:GLN:NE2	2.51	0.44
2:B:1095:GLY:HA3	2:B:1096:PRO:HD3	1.90	0.44
2:B:1232:LYS:HB2	2:B:1240:TYR:CE2	2.53	0.44
2:E:220:HIS:NE2	2:E:436:ILE:HB	2.33	0.44
2:E:436:ILE:HG22	2:E:438:LEU:HD22	2.00	0.44
2:E:1179:HIS:O	2:E:1182:LYS:HG2	2.17	0.44
2:E:1273:TRP:HE3	2:E:1294:GLN:OE1	2.00	0.44
2:E:1607:HIS:O	2:E:1611:LEU:N	2.50	0.44
3:F:95:ALA:O	3:F:99:PRO:HG2	2.18	0.44
3:F:118:ASP:N	3:F:118:ASP:OD1	2.49	0.44
2:B:257:ASN:O	2:B:488:ALA:N	2.33	0.44
2:B:436:ILE:HG22	2:B:438:LEU:HD22	2.00	0.44
2:B:1273:TRP:HE3	2:B:1294:GLN:OE1	2.00	0.44
1:D:585:VAL:HG12	1:D:607:LYS:HD2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:576:TYR:CD1	1:A:591:LEU:HG	2.54	0.43
2:B:142:ALA:O	2:B:146:LYS:HG3	2.18	0.43
2:B:258:TYR:CE1	2:B:489:GLY:HA3	2.53	0.43
2:B:1439:PRO:HA	2:B:1442:LYS:NZ	2.31	0.43
3:C:43:ASN:HA	3:C:52:ASN:HA	1.99	0.43
1:D:591:LEU:HD11	1:D:601:HIS:CE1	2.53	0.43
2:E:72:GLU:O	2:E:76:GLN:NE2	2.49	0.43
2:E:228:PHE:HE2	2:E:399:LEU:HD12	1.83	0.43
2:E:258:TYR:HA	2:E:488:ALA:HB3	2.00	0.43
2:E:296:LEU:HB2	2:E:329:ILE:HD13	1.98	0.43
2:E:656:LYS:O	2:E:659:GLU:HG2	2.18	0.43
2:E:1382:ILE:HD11	2:E:1504:VAL:HB	1.99	0.43
2:E:1538:TRP:CE2	2:E:1539:ASP:HB2	2.53	0.43
2:E:1631:GLU:O	2:E:1635:LYS:HG3	2.18	0.43
2:B:111:LEU:O	2:B:115:ARG:HG2	2.18	0.43
2:B:720:ILE:HG12	2:B:766:PHE:CE1	2.53	0.43
2:B:876:GLU:HG2	2:B:877:VAL:HG13	1.99	0.43
2:B:965:ASP:H	2:B:968:HIS:HB2	1.83	0.43
2:B:1133:GLN:OE1	2:B:1136:PHE:HD2	2.01	0.43
2:B:1499:LEU:HG	2:B:1501:TRP:H	1.81	0.43
3:C:96:LYS:O	3:C:100:GLU:HG3	2.19	0.43
2:E:3:ARG:NH2	2:E:42:GLU:HG2	2.33	0.43
2:E:642:ASN:HA	2:E:644:ARG:NH2	2.33	0.43
2:E:874:CYS:SG	2:E:875:ARG:N	2.91	0.43
2:E:993:PHE:O	2:E:997:ILE:HG22	2.17	0.43
2:E:1557:PRO:HB2	2:E:1560:MET:O	2.17	0.43
1:A:670:ASN:OD1	1:A:675:LYS:HE3	2.18	0.43
2:B:744:ALA:HB3	2:B:804:ARG:NH1	2.34	0.43
2:B:875:ARG:NH1	2:B:921:THR:HB	2.33	0.43
2:B:957:MET:O	2:B:960:LEU:HB3	2.19	0.43
2:B:957:MET:O	2:B:961:LEU:HG	2.17	0.43
3:C:95:ALA:O	3:C:99:PRO:HG2	2.18	0.43
3:C:167:THR:O	3:C:170:ASP:N	2.51	0.43
1:D:576:TYR:CE1	1:D:591:LEU:HG	2.54	0.43
2:E:757:LEU:HD21	2:E:816:ALA:N	2.33	0.43
2:E:821:PRO:HA	2:E:824:ILE:HG23	2.01	0.43
2:E:1023:GLN:O	2:E:1027:VAL:HG13	2.17	0.43
2:E:1071:LYS:HE2	2:E:1071:LYS:HB2	1.89	0.43
2:E:1110:LEU:O	2:E:1114:LEU:HD23	2.19	0.43
2:E:1232:LYS:HB2	2:E:1240:TYR:CE2	2.53	0.43
2:E:1611:LEU:HD11	2:E:1616:LYS:HA	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:642:ASN:HA	2:B:644:ARG:NH2	2.34	0.43
2:B:642:ASN:O	2:B:646:ASN:N	2.50	0.43
2:B:1382:ILE:HD11	2:B:1504:VAL:HB	1.99	0.43
2:B:1567:GLU:HA	2:B:1571:PHE:HB2	2.01	0.43
2:B:1593:ILE:O	2:B:1597:MET:HG2	2.18	0.43
2:B:1631:GLU:O	2:B:1635:LYS:HG3	2.18	0.43
2:E:111:LEU:O	2:E:115:ARG:HG2	2.18	0.43
2:E:333:ILE:O	2:E:405:LEU:HD22	2.18	0.43
2:E:805:PRO:O	2:E:808:GLU:HG2	2.18	0.43
3:F:164:GLY:O	3:F:168:VAL:N	2.33	0.43
1:A:543:GLU:HG2	1:A:544:ILE:N	2.34	0.43
1:A:585:VAL:HG12	1:A:607:LYS:HD2	1.99	0.43
2:B:41:TYR:CE2	2:B:44:TRP:HD1	2.37	0.43
2:B:821:PRO:HA	2:B:824:ILE:HG23	2.01	0.43
2:B:831:PHE:CG	2:B:832:ASP:N	2.87	0.43
2:B:870:ARG:NH1	2:B:874:CYS:HB3	2.34	0.43
2:B:1039:GLU:O	2:B:1040:LEU:HD23	2.18	0.43
2:B:1231:TYR:HE2	2:B:1243:TYR:HE1	1.66	0.43
2:B:1250:LEU:HA	2:B:1250:LEU:HD23	1.76	0.43
2:B:1545:HIS:N	2:B:1546:PRO:HD2	2.34	0.43
3:C:118:ASP:N	3:C:118:ASP:OD1	2.49	0.43
1:D:539:LYS:NZ	1:D:540:ILE:HD11	2.33	0.43
1:D:543:GLU:HG2	1:D:544:ILE:N	2.34	0.43
1:D:546:GLU:HB2	1:D:550:GLN:HE22	1.82	0.43
2:E:258:TYR:CE1	2:E:489:GLY:HA3	2.53	0.43
2:E:678:ASN:O	2:E:682:GLU:HG2	2.17	0.43
2:E:957:MET:O	2:E:961:LEU:HG	2.17	0.43
2:E:1233:GLU:HG3	2:E:1234:LYS:HD2	2.01	0.43
1:A:614:LYS:HZ1	1:A:648:SER:H	1.66	0.43
1:A:640:LEU:O	1:A:655:ILE:HA	2.16	0.43
2:B:3:ARG:NH2	2:B:42:GLU:HG2	2.33	0.43
2:B:1150:GLU:O	2:B:1154:LYS:HG2	2.19	0.43
2:B:1233:GLU:HG3	2:B:1234:LYS:HD2	2.01	0.43
2:B:1256:ASN:HB3	2:B:1259:GLU:OE1	2.18	0.43
2:B:1314:TRP:HB3	2:B:1348:PHE:HB3	2.01	0.43
2:B:1387:GLU:HG2	2:B:1388:TYR:N	2.34	0.43
2:B:1632:LYS:HD2	2:B:1636:HIS:HB2	2.01	0.43
3:C:77:VAL:HG11	3:C:175:ALA:HB3	2.00	0.43
2:E:243:MET:O	2:E:258:TYR:N	2.32	0.43
2:E:444:ASN:HB2	2:E:519:ILE:HG12	2.00	0.43
2:E:931:ARG:C	2:E:932:LEU:HD12	2.39	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:1301:TYR:HE2	2:E:1320:LEU:HD22	1.84	0.43
1:A:551:GLN:HG3	2:B:106:TYR:HD2	1.83	0.43
1:A:580:SER:HB2	1:A:585:VAL:CG2	2.49	0.43
2:B:258:TYR:HA	2:B:488:ALA:HB3	2.00	0.43
2:B:656:LYS:O	2:B:659:GLU:HG2	2.18	0.43
2:B:775:LEU:CD2	2:B:781:SER:HB2	2.49	0.43
2:B:1261:ALA:HB1	2:B:1304:ILE:HG23	2.00	0.43
1:D:723:VAL:HB	2:E:3:ARG:H	1.84	0.43
2:E:140:GLU:N	2:E:140:GLU:OE1	2.52	0.43
2:E:140:GLU:O	2:E:144:LEU:HD23	2.18	0.43
2:E:1121:ARG:HD3	2:E:1168:TYR:HD2	1.84	0.43
3:F:77:VAL:HG11	3:F:175:ALA:HB3	2.00	0.43
3:F:160:LEU:HD12	3:F:160:LEU:HA	1.85	0.43
3:F:167:THR:O	3:F:170:ASP:N	2.51	0.43
2:B:220:HIS:NE2	2:B:436:ILE:HB	2.33	0.43
2:B:443:ARG:HG3	2:B:627:CYS:O	2.19	0.43
2:B:879:LEU:HG	2:B:931:ARG:NH1	2.34	0.43
2:B:1121:ARG:HD3	2:B:1168:TYR:HD2	1.84	0.43
2:B:1343:LYS:HE3	2:B:1343:LYS:HB2	1.76	0.43
2:B:1567:GLU:HA	2:B:1571:PHE:CD1	2.54	0.43
2:B:1630:LYS:HE3	2:B:1630:LYS:HB3	1.86	0.43
2:E:41:TYR:CE2	2:E:44:TRP:HD1	2.37	0.43
2:E:656:LYS:N	2:E:656:LYS:HD2	2.34	0.43
2:E:990:PHE:HB3	2:E:1045:ASN:OD1	2.19	0.43
2:E:1091:TRP:CD1	2:E:1127:ILE:HG23	2.54	0.43
2:E:1474:ASP:OD2	2:E:1477:ASN:HB2	2.19	0.43
2:E:1483:TRP:HA	2:E:1512:ILE:O	2.19	0.43
3:F:90:PHE:HA	3:F:93:VAL:HG12	2.01	0.43
1:A:693:GLU:O	1:A:696:LEU:HG	2.19	0.43
2:B:694:PHE:CZ	2:B:737:LEU:HB3	2.51	0.43
2:B:964:MET:HB2	2:B:969:TYR:CE2	2.54	0.43
2:B:1121:ARG:HG2	2:B:1125:ILE:CD1	2.49	0.43
2:B:1221:MET:HA	2:B:1224:THR:HG22	1.99	0.43
2:B:1522:MET:CE	2:B:1596:GLN:HB2	2.49	0.43
3:C:9:VAL:HG12	3:C:58:THR:OG1	2.19	0.43
1:D:693:GLU:O	1:D:696:LEU:HG	2.19	0.43
2:E:562:LEU:O	2:E:633:GLN:NE2	2.51	0.43
2:E:724:PHE:CZ	2:E:726:ALA:HB3	2.54	0.43
2:E:957:MET:O	2:E:960:LEU:HB3	2.19	0.43
2:E:1193:PHE:O	2:E:1196:LEU:HB3	2.19	0.43
2:E:1200:LEU:O	2:E:1204:LEU:HD23	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:1261:ALA:HB1	2:E:1304:ILE:HG23	2.01	0.43
2:E:1482:MET:HB3	2:E:1517:ASN:ND2	2.34	0.43
2:E:1545:HIS:N	2:E:1546:PRO:HD2	2.34	0.43
1:A:576:TYR:CE1	1:A:591:LEU:HG	2.54	0.43
2:B:80:VAL:H	2:B:85:LEU:HD11	1.84	0.43
2:B:444:ASN:HB2	2:B:519:ILE:HG12	2.00	0.43
2:B:561:THR:HB	2:B:631:LEU:HD22	2.01	0.43
2:B:805:PRO:O	2:B:808:GLU:HG2	2.18	0.43
2:B:874:CYS:SG	2:B:875:ARG:N	2.91	0.43
3:C:90:PHE:HA	3:C:93:VAL:HG12	2.01	0.43
1:D:609:PRO:HB2	1:D:612:ASP:OD1	2.19	0.43
2:E:472:VAL:O	2:E:479:LEU:HD12	2.19	0.43
2:E:768:ILE:HG23	2:E:830:VAL:HG11	2.01	0.43
2:E:860:MET:HG3	2:E:882:LEU:HD22	2.01	0.43
2:E:909:ILE:HG13	2:E:910:LEU:N	2.33	0.43
2:E:1499:LEU:HD21	2:E:1501:TRP:NE1	2.34	0.43
2:E:1593:ILE:O	2:E:1597:MET:HG2	2.18	0.43
2:B:155:GLY:O	2:B:159:LEU:HG	2.18	0.42
2:B:203:SER:HB3	2:B:210:LEU:HD12	2.01	0.42
2:B:472:VAL:O	2:B:479:LEU:HD12	2.19	0.42
2:B:1136:PHE:HB2	2:B:1186:LEU:HD23	2.01	0.42
2:B:1432:LYS:HB3	2:B:1432:LYS:HE3	1.90	0.42
2:B:1483:TRP:HA	2:B:1512:ILE:O	2.19	0.42
2:E:144:LEU:O	2:E:148:VAL:HG12	2.19	0.42
2:E:203:SER:HB3	2:E:210:LEU:HD12	2.01	0.42
2:E:720:ILE:HG12	2:E:766:PHE:CE1	2.53	0.42
2:E:879:LEU:HG	2:E:931:ARG:NH1	2.34	0.42
2:E:1136:PHE:HB2	2:E:1186:LEU:HD23	2.01	0.42
1:A:551:GLN:HG3	2:B:106:TYR:CD2	2.54	0.42
2:B:1474:ASP:OD2	2:B:1477:ASN:HB2	2.19	0.42
2:B:1589:LEU:HA	2:B:1592:LEU:HD12	2.00	0.42
2:B:1611:LEU:HD11	2:B:1616:LYS:HA	2.01	0.42
2:E:142:ALA:O	2:E:146:LYS:HG3	2.18	0.42
2:E:676:LEU:HD22	2:E:693:VAL:HG22	2.00	0.42
2:E:800:MET:O	2:E:804:ARG:HG3	2.19	0.42
2:E:831:PHE:CG	2:E:832:ASP:N	2.87	0.42
2:E:1121:ARG:HG2	2:E:1125:ILE:CD1	2.49	0.42
2:E:1532:CYS:HA	2:E:1535:GLN:HG3	2.01	0.42
2:E:1567:GLU:HA	2:E:1571:PHE:HB2	2.01	0.42
3:F:96:LYS:O	3:F:100:GLU:HG3	2.19	0.42
2:B:561:THR:HG22	2:B:632:THR:O	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:768:ILE:HG23	2:B:830:VAL:HG11	2.01	0.42
2:B:800:MET:O	2:B:804:ARG:HG3	2.19	0.42
2:B:879:LEU:HD23	2:B:924:HIS:HE1	1.84	0.42
1:D:576:TYR:CD1	1:D:591:LEU:HG	2.54	0.42
2:E:685:ASP:OD1	2:E:685:ASP:N	2.52	0.42
2:E:744:ALA:HB3	2:E:804:ARG:NH1	2.34	0.42
2:E:775:LEU:CD2	2:E:781:SER:HB2	2.49	0.42
2:E:875:ARG:NH1	2:E:921:THR:HB	2.33	0.42
2:E:964:MET:HB2	2:E:969:TYR:CE2	2.54	0.42
2:E:1306:SER:O	2:E:1310:LYS:HG2	2.20	0.42
2:E:1372:PHE:CZ	2:E:1424:GLN:HB3	2.54	0.42
2:E:1544:VAL:HG12	2:E:1610:LYS:HB3	2.01	0.42
2:E:1589:LEU:HA	2:E:1592:LEU:HD12	2.00	0.42
1:A:719:ASN:O	2:B:1:MET:N	2.45	0.42
2:B:98:TRP:HZ3	2:B:159:LEU:HD12	1.85	0.42
2:B:144:LEU:O	2:B:148:VAL:HG12	2.19	0.42
2:B:256:GLU:HG2	2:B:429:ARG:H	1.85	0.42
2:B:771:ARG:NH2	2:B:784:GLY:HA2	2.35	0.42
2:B:990:PHE:HB3	2:B:1045:ASN:OD1	2.19	0.42
2:B:1193:PHE:O	2:B:1196:LEU:HB3	2.19	0.42
2:B:1306:SER:HB3	2:B:1310:LYS:NZ	2.34	0.42
2:B:1345:ARG:HG2	2:B:1349:TYR:HE2	1.82	0.42
2:B:1362:TYR:HD2	2:B:1462:PHE:CE2	2.34	0.42
1:D:579:LEU:HA	1:D:586:LEU:HD13	2.01	0.42
1:D:685:ASP:HA	1:D:688:THR:HG22	2.01	0.42
2:E:36:HIS:O	2:E:48:TYR:N	2.52	0.42
2:E:962:GLN:O	2:E:1019:ARG:NH1	2.51	0.42
2:E:1039:GLU:O	2:E:1040:LEU:HD23	2.18	0.42
2:E:1250:LEU:HD23	2:E:1250:LEU:HA	1.75	0.42
2:E:1483:TRP:NE1	2:E:1514:PRO:HD3	2.34	0.42
2:E:1522:MET:CE	2:E:1596:GLN:HB2	2.49	0.42
2:B:556:ASN:HD22	2:B:560:THR:HG1	1.59	0.42
2:B:656:LYS:N	2:B:656:LYS:HD2	2.34	0.42
2:B:745:ASP:N	2:B:804:ARG:HH12	2.17	0.42
2:B:860:MET:HG3	2:B:882:LEU:HD22	2.01	0.42
2:B:1091:TRP:CD1	2:B:1127:ILE:HG23	2.54	0.42
2:B:1200:LEU:O	2:B:1204:LEU:HD23	2.19	0.42
2:B:1275:ASP:OD2	2:B:1275:ASP:N	2.43	0.42
2:B:1499:LEU:HD21	2:B:1501:TRP:NE1	2.34	0.42
3:C:98:TYR:CE1	3:C:149:ILE:HB	2.54	0.42
1:D:591:LEU:HD13	1:D:591:LEU:HA	1.90	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:3:ARG:NH2	2:E:42:GLU:H	2.13	0.42
2:E:1117:GLU:OE2	2:E:1120:LEU:HG	2.19	0.42
3:F:9:VAL:HG12	3:F:58:THR:OG1	2.19	0.42
1:A:669:LEU:O	1:A:673:LEU:HG	2.19	0.42
2:B:165:VAL:O	2:B:171:ASN:ND2	2.33	0.42
2:B:500:VAL:HG13	2:B:534:ARG:NH2	2.30	0.42
2:B:1279:VAL:O	2:B:1282:LEU:HG	2.20	0.42
2:B:1306:SER:O	2:B:1310:LYS:HG2	2.20	0.42
2:B:1463:ARG:HA	2:B:1487:THR:O	2.20	0.42
1:D:663:CYS:HB3	1:D:679:SER:HA	2.01	0.42
2:E:98:TRP:HZ3	2:E:159:LEU:HD12	1.84	0.42
2:E:143:GLU:HG3	2:E:147:LYS:HZ2	1.85	0.42
2:E:760:LEU:CD2	2:E:819:TYR:HB3	2.50	0.42
2:E:799:ASN:HA	2:E:802:MET:HG3	2.02	0.42
2:E:1314:TRP:HB3	2:E:1348:PHE:HB3	2.01	0.42
3:F:98:TYR:CE1	3:F:149:ILE:HB	2.54	0.42
2:B:43:GLY:O	2:B:61:GLU:N	2.38	0.42
2:B:140:GLU:N	2:B:140:GLU:OE1	2.52	0.42
2:B:685:ASP:OD1	2:B:685:ASP:N	2.52	0.42
2:B:724:PHE:CZ	2:B:726:ALA:HB3	2.54	0.42
2:B:760:LEU:CD2	2:B:819:TYR:HB3	2.50	0.42
2:B:871:GLN:CD	2:B:875:ARG:HD3	2.39	0.42
2:B:1072:ILE:HG13	2:B:1073:VAL:N	2.34	0.42
2:B:1205:LEU:HA	2:B:1208:ARG:HD3	2.01	0.42
2:B:1372:PHE:CZ	2:B:1424:GLN:HB3	2.54	0.42
1:D:669:LEU:O	1:D:673:LEU:HG	2.19	0.42
2:E:1105:MET:SD	2:E:1108:PRO:HG2	2.59	0.42
2:E:1157:GLN:HA	2:E:1160:GLU:HG2	2.02	0.42
2:E:1234:LYS:HD2	2:E:1234:LYS:N	2.35	0.42
2:E:1546:PRO:O	2:E:1549:MET:HB2	2.20	0.42
2:E:1567:GLU:HA	2:E:1571:PHE:CD1	2.54	0.42
1:A:568:ARG:HB2	1:A:569:ARG:HH11	1.85	0.42
2:B:36:HIS:O	2:B:48:TYR:N	2.52	0.42
2:B:1544:VAL:HG12	2:B:1610:LYS:HB3	2.02	0.42
1:D:568:ARG:HB2	1:D:569:ARG:HH11	1.85	0.42
1:D:580:SER:HB2	1:D:585:VAL:CG2	2.49	0.42
2:E:107:VAL:HG23	2:E:108:ASN:OD1	2.20	0.42
2:E:741:VAL:HG23	2:E:801:LEU:CD1	2.50	0.42
2:E:795:PHE:HD2	2:E:839:LEU:HD13	1.85	0.42
2:E:933:LEU:HD23	2:E:937:ASN:OD1	2.20	0.42
2:E:1256:ASN:HB3	2:E:1259:GLU:OE1	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:1463:ARG:HA	2:E:1487:THR:O	2.20	0.42
2:E:1632:LYS:HD2	2:E:1636:HIS:HB2	2.01	0.42
2:B:222:TYR:CG	2:B:289:LEU:HD11	2.55	0.42
2:B:931:ARG:C	2:B:932:LEU:HD12	2.39	0.42
2:B:1110:LEU:O	2:B:1114:LEU:HD23	2.18	0.42
2:B:1349:TYR:HA	2:B:1352:ILE:HG22	2.02	0.42
3:C:129:LEU:O	3:C:133:LYS:N	2.53	0.42
2:E:33:ASP:O	2:E:35:VAL:HG13	2.20	0.42
2:E:561:THR:HB	2:E:631:LEU:HD22	2.01	0.42
2:E:772:VAL:O	2:E:776:ARG:HG2	2.20	0.42
2:E:921:THR:OG1	2:E:924:HIS:HB3	2.20	0.42
1:A:579:LEU:HA	1:A:586:LEU:HD13	2.01	0.42
1:A:609:PRO:HB2	1:A:612:ASP:OD1	2.19	0.42
2:B:743:ASN:HB3	2:B:749:LYS:HD2	2.02	0.42
2:B:933:LEU:HD23	2:B:937:ASN:OD1	2.20	0.42
2:B:990:PHE:HE1	2:B:1046:TYR:HB2	1.85	0.42
2:B:1234:LYS:HD2	2:B:1234:LYS:N	2.35	0.42
2:B:1483:TRP:NE1	2:B:1514:PRO:HD3	2.34	0.42
2:E:256:GLU:HG2	2:E:429:ARG:H	1.85	0.42
2:E:965:ASP:OD2	2:E:967:SER:OG	2.24	0.42
2:E:990:PHE:HE1	2:E:1046:TYR:HB2	1.85	0.42
2:E:1205:LEU:HA	2:E:1208:ARG:HD3	2.01	0.42
2:E:1306:SER:HB3	2:E:1310:LYS:NZ	2.35	0.42
2:E:1318:ILE:O	2:E:1322:LYS:HG2	2.20	0.42
2:E:1373:PRO:HD2	2:E:1376:LEU:HB2	2.01	0.42
2:E:1491:THR:HG23	2:E:1493:TYR:O	2.20	0.42
2:E:1535:GLN:OE1	2:E:1542:LEU:HD11	2.20	0.42
1:A:546:GLU:O	1:A:549:LYS:HG2	2.21	0.41
2:B:430:LYS:HE2	2:B:432:GLY:HA3	2.02	0.41
2:B:795:PHE:HD2	2:B:839:LEU:HD13	1.85	0.41
2:B:921:THR:OG1	2:B:924:HIS:HB3	2.20	0.41
2:B:1373:PRO:HD2	2:B:1376:LEU:HB2	2.02	0.41
2:B:1446:VAL:HG12	2:E:1333:PHE:CZ	2.54	0.41
2:E:98:TRP:CZ3	2:E:159:LEU:HD12	2.55	0.41
2:E:172:ILE:HA	2:E:175:PRO:HG2	2.02	0.41
2:E:222:TYR:CG	2:E:289:LEU:HD11	2.55	0.41
2:E:1054:LEU:HD12	2:E:1054:LEU:HA	1.79	0.41
2:E:1102:ILE:HD11	2:E:1134:CYS:HB2	2.02	0.41
2:E:1150:GLU:O	2:E:1154:LYS:HG2	2.19	0.41
2:E:1231:TYR:HE2	2:E:1243:TYR:HE1	1.66	0.41
2:E:1306:SER:HB3	2:E:1310:LYS:HZ1	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:663:CYS:HB3	1:A:679:SER:HA	2.01	0.41
1:A:685:ASP:HA	1:A:688:THR:HG22	2.02	0.41
2:B:255:SER:HA	2:B:430:LYS:HA	2.03	0.41
2:B:825:ASN:O	2:B:829:LEU:HD23	2.20	0.41
2:B:1105:MET:SD	2:B:1108:PRO:HG2	2.59	0.41
2:B:1117:GLU:OE2	2:B:1120:LEU:HG	2.19	0.41
2:B:1529:ILE:HG12	2:B:1550:LEU:HD21	2.02	0.41
3:C:129:LEU:HB3	3:C:134:LEU:O	2.20	0.41
2:E:1387:GLU:HG2	2:E:1388:TYR:N	2.34	0.41
2:E:1525:THR:HA	2:E:1528:ARG:NH1	2.35	0.41
3:F:153:LYS:HA	3:F:153:LYS:HD2	1.90	0.41
2:B:1301:TYR:HE2	2:B:1320:LEU:HD22	1.84	0.41
2:B:1576:LEU:HD22	2:B:1583:GLN:HB3	2.02	0.41
3:C:123:LYS:HA	3:C:126:ILE:HG12	2.03	0.41
1:D:697:ARG:HE	2:E:30:GLN:CD	2.24	0.41
2:E:443:ARG:HG3	2:E:627:CYS:O	2.19	0.41
2:E:871:GLN:CD	2:E:875:ARG:HD3	2.39	0.41
2:E:1072:ILE:HG13	2:E:1073:VAL:N	2.34	0.41
2:E:1216:SER:OG	2:E:1219:ASN:OD1	2.31	0.41
2:E:1362:TYR:CD2	2:E:1462:PHE:HE2	2.37	0.41
2:E:1466:ARG:HB3	2:E:1485:GLU:H	1.86	0.41
2:B:99:ALA:O	2:B:102:TRP:HB3	2.20	0.41
2:B:467:GLU:N	2:B:534:ARG:HH12	2.18	0.41
2:B:875:ARG:HG2	2:B:924:HIS:CE1	2.56	0.41
2:B:1292:THR:O	2:B:1295:GLU:N	2.54	0.41
2:B:1532:CYS:HA	2:B:1535:GLN:HG3	2.01	0.41
2:B:1626:PHE:CD2	2:B:1627:ARG:HD3	2.55	0.41
2:E:305:HIS:CG	2:E:314:HIS:HB2	2.56	0.41
2:E:1066:GLN:OE1	2:E:1069:ARG:NH1	2.45	0.41
2:E:1556:ASP:HB2	2:E:1558:ALA:HB2	2.02	0.41
3:F:123:LYS:HA	3:F:126:ILE:HG12	2.03	0.41
1:A:534:LEU:HD23	1:A:534:LEU:HA	1.94	0.41
2:B:10:GLN:NE2	2:B:37:ILE:O	2.46	0.41
2:B:1322:LYS:HD3	2:B:1345:ARG:NH1	2.36	0.41
2:B:1443:ASP:OD1	2:B:1444:LYS:HD2	2.21	0.41
2:E:196:GLU:O	2:E:199:GLN:HG3	2.20	0.41
2:E:430:LYS:HE2	2:E:432:GLY:HA3	2.02	0.41
2:E:771:ARG:NH2	2:E:784:GLY:HA2	2.35	0.41
3:F:49:LYS:NZ	3:F:50:PRO:O	2.42	0.41
2:B:1157:GLN:HA	2:B:1160:GLU:HG2	2.02	0.41
2:B:1216:SER:OG	2:B:1219:ASN:OD1	2.31	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1471:GLY:O	2:B:1473:LYS:NZ	2.33	0.41
2:B:1525:THR:HA	2:B:1528:ARG:NH1	2.35	0.41
1:D:667:ASP:OD2	1:D:677:MET:HB3	2.20	0.41
2:E:561:THR:HG22	2:E:632:THR:O	2.20	0.41
2:E:745:ASP:N	2:E:804:ARG:HH12	2.17	0.41
2:E:820:LEU:O	2:E:823:ILE:HG12	2.21	0.41
2:E:1065:SER:OG	2:E:1068:LYS:HB2	2.21	0.41
2:E:1392:GLU:HA	2:E:1395:SER:HB3	2.02	0.41
2:E:1549:MET:HE1	3:F:56:TRP:CE3	2.56	0.41
2:E:1626:PHE:CD2	2:E:1627:ARG:HD3	2.56	0.41
2:B:196:GLU:O	2:B:199:GLN:HG3	2.20	0.41
2:B:262:TRP:CZ2	2:B:266:GLY:HA2	2.56	0.41
2:B:745:ASP:N	2:B:745:ASP:OD1	2.53	0.41
2:B:799:ASN:HA	2:B:802:MET:HG3	2.02	0.41
2:B:1236:ARG:HD3	2:B:1236:ARG:HA	1.87	0.41
2:B:1478:GLU:O	2:B:1482:MET:HG2	2.21	0.41
2:E:129:SER:O	2:E:132:LEU:HB2	2.21	0.41
2:E:144:LEU:HD22	2:E:147:LYS:HZ3	1.86	0.41
2:E:419:HIS:CD2	2:E:420:LEU:HG	2.56	0.41
2:E:467:GLU:N	2:E:534:ARG:HH12	2.18	0.41
2:E:825:ASN:O	2:E:829:LEU:HD23	2.20	0.41
2:E:856:LYS:O	2:E:860:MET:HE3	2.21	0.41
2:E:875:ARG:HG2	2:E:924:HIS:CE1	2.56	0.41
2:E:1322:LYS:HD3	2:E:1345:ARG:NH1	2.36	0.41
3:F:129:LEU:HB3	3:F:134:LEU:O	2.20	0.41
1:A:564:LYS:HG3	1:A:575:TRP:CD1	2.56	0.41
2:B:4:TRP:CE3	2:B:46:ARG:HG2	2.56	0.41
2:B:305:HIS:CG	2:B:314:HIS:HB2	2.56	0.41
2:B:741:VAL:HG23	2:B:801:LEU:CD1	2.50	0.41
2:B:839:LEU:O	2:B:842:LYS:HG2	2.20	0.41
2:E:262:TRP:CZ2	2:E:266:GLY:HA2	2.56	0.41
2:E:676:LEU:HB3	2:E:693:VAL:HG13	2.03	0.41
2:E:745:ASP:N	2:E:745:ASP:OD1	2.53	0.41
2:E:1154:LYS:HA	2:E:1157:GLN:NE2	2.36	0.41
2:E:1349:TYR:HA	2:E:1352:ILE:HG22	2.02	0.41
2:E:1520:GLU:HA	2:E:1523:GLU:HG3	2.03	0.41
1:A:724:TYR:HB2	2:B:4:TRP:O	2.21	0.41
2:B:3:ARG:HH22	2:B:42:GLU:HG2	1.86	0.41
2:B:3:ARG:NH2	2:B:42:GLU:H	2.13	0.41
2:B:107:VAL:HG23	2:B:108:ASN:OD1	2.20	0.41
2:B:157:ARG:HG3	2:B:194:ILE:HG23	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:187:HIS:CD2	2:B:1009:MET:HG2	2.56	0.41
2:B:486:PRO:HB3	2:B:496:TYR:HE1	1.86	0.41
2:B:772:VAL:O	2:B:776:ARG:HG2	2.20	0.41
2:B:866:SER:O	2:B:867:THR:OG1	2.36	0.41
2:B:986:LEU:HD11	2:B:1024:PHE:HB3	2.03	0.41
2:B:1102:ILE:HD11	2:B:1134:CYS:HB2	2.02	0.41
2:B:1154:LYS:HA	2:B:1157:GLN:NE2	2.36	0.41
2:B:1220:ARG:HE	2:B:1250:LEU:HD21	1.86	0.41
2:B:1272:GLN:O	2:B:1293:GLN:HG3	2.21	0.41
2:B:1312:LYS:HE2	2:B:1312:LYS:HB2	1.89	0.41
2:B:1313:MET:CE	2:B:1496:PRO:HG3	2.51	0.41
2:B:1318:ILE:O	2:B:1322:LYS:HG2	2.20	0.41
2:B:1556:ASP:HB2	2:B:1558:ALA:HB2	2.02	0.41
2:B:1633:VAL:O	2:B:1639:VAL:N	2.53	0.41
3:C:87:PRO:HG2	3:C:134:LEU:HB3	2.03	0.41
1:D:556:LEU:HD23	1:D:665:TRP:HD1	1.85	0.41
1:D:717:PRO:HD2	2:E:1:MET:SD	2.61	0.41
2:E:99:ALA:O	2:E:102:TRP:HB3	2.20	0.41
2:E:116:GLN:O	2:E:119:GLN:HG3	2.21	0.41
2:E:157:ARG:HG3	2:E:194:ILE:HG23	2.03	0.41
2:E:163:LEU:HD13	2:E:194:ILE:HD11	2.03	0.41
2:E:486:PRO:HB3	2:E:496:TYR:HE1	1.86	0.41
2:E:719:TYR:HD1	2:E:723:HIS:HB2	1.86	0.41
2:E:839:LEU:O	2:E:842:LYS:HG2	2.20	0.41
2:E:1022:ASN:O	2:E:1026:GLU:OE1	2.39	0.41
2:E:1292:THR:O	2:E:1295:GLU:N	2.54	0.41
2:E:1295:GLU:O	2:E:1298:GLU:HG3	2.21	0.41
2:E:1313:MET:CE	2:E:1496:PRO:HG3	2.51	0.41
2:E:1576:LEU:HD22	2:E:1583:GLN:HB3	2.02	0.41
3:F:129:LEU:O	3:F:133:LYS:N	2.53	0.41
2:B:197:LYS:HA	2:B:200:GLU:CG	2.46	0.41
2:B:254:ILE:O	2:B:431:MET:N	2.40	0.41
2:B:651:LYS:HD2	2:B:652:HIS:N	2.36	0.41
2:B:701:ILE:HB	2:B:759:ALA:HB1	2.03	0.41
2:B:1063:THR:HA	2:B:1069:ARG:HH11	1.86	0.41
2:B:1065:SER:OG	2:B:1068:LYS:HB2	2.21	0.41
2:B:1086:ARG:HA	2:B:1089:ASP:OD2	2.21	0.41
1:D:531:ARG:HH21	1:D:534:LEU:HD12	1.86	0.41
2:E:4:TRP:CE3	2:E:46:ARG:HG2	2.56	0.41
2:E:80:VAL:H	2:E:85:LEU:HD11	1.84	0.41
2:E:166:ARG:HD3	2:E:173:LEU:HB2	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:821:PRO:O	2:E:824:ILE:HG12	2.21	0.41
2:E:879:LEU:O	2:E:880:PRO:C	2.60	0.41
2:E:1063:THR:HA	2:E:1069:ARG:HH11	1.86	0.41
2:E:1279:VAL:O	2:E:1282:LEU:HG	2.20	0.41
3:F:87:PRO:HG2	3:F:134:LEU:HB3	2.03	0.41
3:F:100:GLU:O	3:F:104:HIS:ND1	2.48	0.41
1:A:727:ASN:N	2:B:46:ARG:HH22	2.18	0.40
2:B:129:SER:O	2:B:132:LEU:HB2	2.21	0.40
2:B:1535:GLN:OE1	2:B:1542:LEU:HD11	2.20	0.40
3:C:160:LEU:HD12	3:C:160:LEU:HA	1.85	0.40
2:E:166:ARG:NE	2:E:169:ASN:OD1	2.55	0.40
2:E:642:ASN:O	2:E:646:ASN:N	2.50	0.40
2:E:651:LYS:HD2	2:E:652:HIS:N	2.36	0.40
2:E:717:GLU:HA	2:E:720:ILE:HD12	2.03	0.40
2:E:743:ASN:HB3	2:E:749:LYS:HD2	2.02	0.40
2:E:890:LEU:HD22	2:E:935:ARG:HG3	2.03	0.40
2:E:1086:ARG:HA	2:E:1089:ASP:OD2	2.21	0.40
2:E:1544:VAL:CG1	2:E:1610:LYS:HB3	2.51	0.40
2:E:1573:GLU:OE1	2:E:1576:LEU:HD12	2.21	0.40
1:A:667:ASP:OD2	1:A:677:MET:HB3	2.20	0.40
2:B:634:ASN:OD1	2:B:637:LEU:N	2.49	0.40
2:B:821:PRO:O	2:B:824:ILE:HG12	2.21	0.40
2:B:912:VAL:O	2:B:915:ARG:HB2	2.21	0.40
2:B:962:GLN:O	2:B:1019:ARG:NH1	2.51	0.40
2:B:1205:LEU:HD13	2:B:1208:ARG:HD3	2.04	0.40
2:B:1376:LEU:HD23	2:B:1376:LEU:HA	1.87	0.40
2:B:1612:THR:HG23	2:B:1615:LEU:H	1.86	0.40
3:C:63:ASP:N	3:C:63:ASP:OD1	2.55	0.40
3:C:78:PHE:HD1	3:C:110:ILE:HD13	1.86	0.40
2:E:879:LEU:HD23	2:E:924:HIS:HE1	1.84	0.40
2:E:1512:ILE:HG23	2:E:1516:GLU:HB3	2.03	0.40
2:B:98:TRP:CZ3	2:B:159:LEU:HD12	2.55	0.40
2:B:717:GLU:HA	2:B:720:ILE:HD12	2.03	0.40
2:B:856:LYS:O	2:B:860:MET:HE3	2.22	0.40
2:B:892:ASP:OD1	2:B:895:ASN:ND2	2.55	0.40
2:B:1295:GLU:O	2:B:1298:GLU:HG3	2.21	0.40
2:B:1470:LYS:HD3	2:B:1483:TRP:CE2	2.56	0.40
2:B:1572:THR:HB	2:B:1574:LYS:HE2	2.03	0.40
2:B:1573:GLU:OE1	2:B:1576:LEU:HD12	2.21	0.40
1:D:564:LYS:HE3	1:D:590:ASP:OD1	2.22	0.40
2:E:45:TYR:CZ	2:E:66:LEU:HD11	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:187:HIS:CD2	2:E:1009:MET:HG2	2.56	0.40
2:E:912:VAL:O	2:E:915:ARG:HB2	2.21	0.40
2:E:1272:GLN:O	2:E:1293:GLN:HG3	2.21	0.40
2:E:1316:LYS:O	2:E:1320:LEU:HG	2.22	0.40
3:F:72:TYR:HD2	3:F:104:HIS:HB3	1.85	0.40
2:B:33:ASP:O	2:B:35:VAL:HG13	2.20	0.40
2:B:181:ILE:HG21	2:B:907:SER:HB2	2.03	0.40
2:B:965:ASP:OD2	2:B:967:SER:OG	2.24	0.40
2:B:1546:PRO:O	2:B:1549:MET:HB2	2.20	0.40
3:C:6:CYS:C	3:C:56:TRP:HD1	2.25	0.40
1:D:599:VAL:HA	1:D:600:PRO:HD3	1.92	0.40
2:E:104:LYS:O	2:E:108:ASN:ND2	2.55	0.40
2:E:455:PHE:CE2	2:E:466:VAL:HG11	2.57	0.40
2:E:746:ASP:CG	2:E:748:SER:HG	2.25	0.40
2:E:986:LEU:HD11	2:E:1024:PHE:HB3	2.03	0.40
2:E:1058:SER:HA	2:E:1080:ARG:NH1	2.37	0.40
2:E:1443:ASP:OD1	2:E:1444:LYS:HD2	2.21	0.40
2:E:1478:GLU:O	2:E:1482:MET:HG2	2.21	0.40
2:E:1612:THR:HG23	2:E:1615:LEU:H	1.86	0.40
2:B:10:GLN:HB3	2:B:40:MET:HE3	2.04	0.40
2:B:116:GLN:O	2:B:119:GLN:HG3	2.21	0.40
2:B:419:HIS:CD2	2:B:420:LEU:HG	2.56	0.40
2:B:719:TYR:HD1	2:B:723:HIS:HB2	1.86	0.40
2:B:929:MET:O	2:B:935:ARG:NH2	2.55	0.40
2:B:994:LYS:HZ2	2:B:1048:HIS:HB3	1.85	0.40
2:B:1081:LYS:NZ	2:B:1119:GLU:HG3	2.37	0.40
2:B:1113:THR:O	2:B:1121:ARG:HG3	2.22	0.40
2:B:1125:ILE:HD12	2:B:1125:ILE:H	1.86	0.40
2:B:1316:LYS:O	2:B:1320:LEU:HG	2.22	0.40
2:B:1482:MET:HB3	2:B:1517:ASN:ND2	2.34	0.40
2:B:1491:THR:HG23	2:B:1493:TYR:O	2.20	0.40
2:B:1544:VAL:CG1	2:B:1610:LYS:HB3	2.51	0.40
3:C:72:TYR:HD2	3:C:104:HIS:HB3	1.85	0.40
2:E:3:ARG:HH22	2:E:42:GLU:HG2	1.86	0.40
2:E:198:ILE:HA	2:E:201:GLU:OE1	2.22	0.40
2:E:728:LEU:HA	2:E:730:TYR:CE2	2.57	0.40
2:E:870:ARG:NH1	2:E:874:CYS:HB3	2.34	0.40
2:E:1572:THR:HB	2:E:1574:LYS:HE2	2.03	0.40
2:E:1617:PRO:HA	2:E:1620:GLU:HG3	2.04	0.40

There are no symmetry-related clashes.

## 5.3 Torsion angles

### 5.3.1 Protein backbone

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	196/733 (27%)	180 (92%)	16 (8%)	0	100	100
1	D	196/733 (27%)	180 (92%)	16 (8%)	0	100	100
2	B	1640/1648 (100%)	1539 (94%)	101 (6%)	0	100	100
2	E	1640/1648 (100%)	1540 (94%)	100 (6%)	0	100	100
3	C	175/184 (95%)	163 (93%)	12 (7%)	0	100	100
3	F	175/184 (95%)	163 (93%)	12 (7%)	0	100	100
All	All	4022/5130 (78%)	3765 (94%)	257 (6%)	0	100	100

There are no Ramachandran outliers to report.

### 5.3.2 Protein sidechains

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	183/664 (28%)	182 (100%)	1 (0%)	86	90
1	D	183/664 (28%)	181 (99%)	2 (1%)	70	80
2	B	1495/1497 (100%)	1488 (100%)	7 (0%)	86	90
2	E	1495/1497 (100%)	1488 (100%)	7 (0%)	86	90
3	C	153/157 (98%)	151 (99%)	2 (1%)	65	77
3	F	153/157 (98%)	151 (99%)	2 (1%)	65	77
All	All	3662/4636 (79%)	3641 (99%)	21 (1%)	82	88

All (21) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	715	LYS
2	B	128	ARG
2	B	534	ARG
2	B	651	LYS
2	B	935	ARG
2	B	1069	ARG
2	B	1568	LYS
2	B	1635	LYS
3	C	66	ARG
3	C	123	LYS
1	D	649	ASN
1	D	715	LYS
2	E	128	ARG
2	E	534	ARG
2	E	651	LYS
2	E	935	ARG
2	E	1069	ARG
2	E	1568	LYS
2	E	1635	LYS
3	F	66	ARG
3	F	123	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (31) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	554	ASN
2	B	119	GLN
2	B	130	GLN
2	B	414	GLN
2	B	526	HIS
2	B	710	GLN
2	B	924	HIS
2	B	962	GLN
2	B	971	HIS
2	B	1133	GLN
2	B	1424	GLN
2	B	1460	GLN
2	B	1517	ASN
2	B	1526	ASN
2	B	1596	GLN
3	C	2	GLN

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Mol	Chain	Res	Type
1	D	554	ASN
2	E	119	GLN
2	E	130	GLN
2	E	414	GLN
2	E	526	HIS
2	E	711	HIS
2	E	924	HIS
2	E	962	GLN
2	E	971	HIS
2	E	1133	GLN
2	E	1424	GLN
2	E	1517	ASN
2	E	1526	ASN
2	E	1596	GLN
3	F	2	GLN

### 5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

### 5.4 Non-standard residues in protein, DNA, RNA chains [i](#)

There are no non-standard protein/DNA/RNA residues in this entry.

### 5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

### 5.6 Ligand geometry [i](#)

There are no ligands in this entry.

### 5.7 Other polymers [i](#)

There are no such residues in this entry.

### 5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

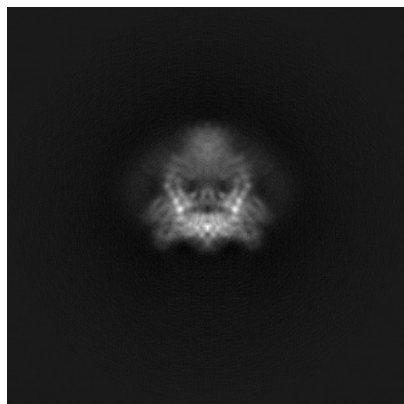
## 6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-60146. These allow visual inspection of the internal detail of the map and identification of artifacts.

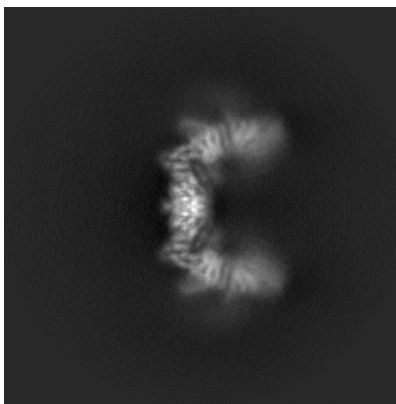
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

### 6.1 Orthogonal projections [i](#)

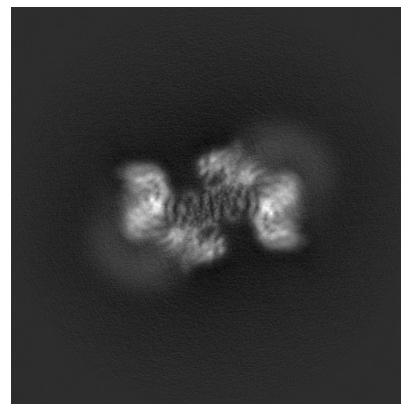
#### 6.1.1 Primary map



X

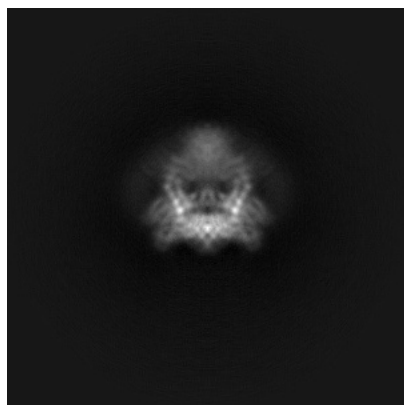


Y

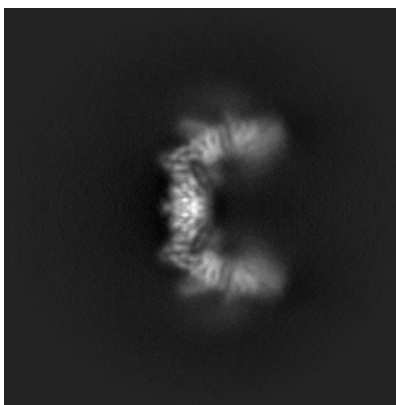


Z

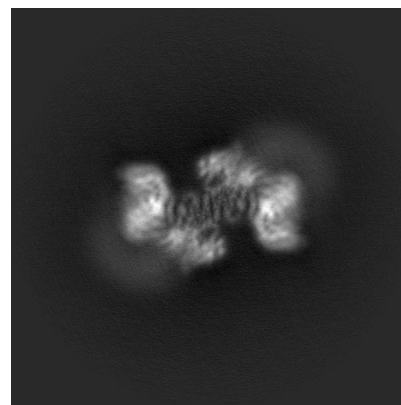
#### 6.1.2 Raw map



X



Y

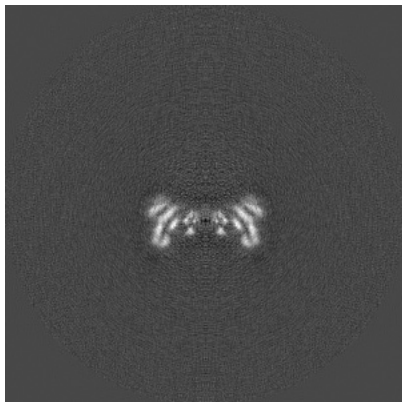


Z

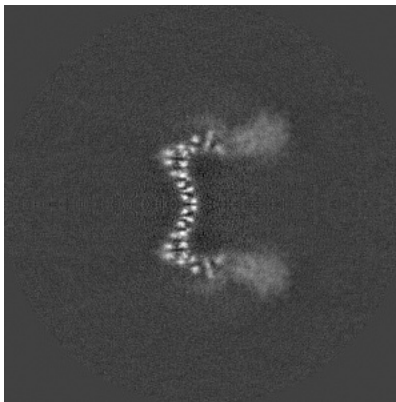
The images above show the map projected in three orthogonal directions.

## 6.2 Central slices [i](#)

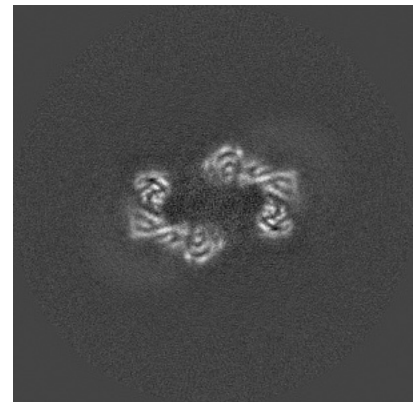
### 6.2.1 Primary map



X Index: 170

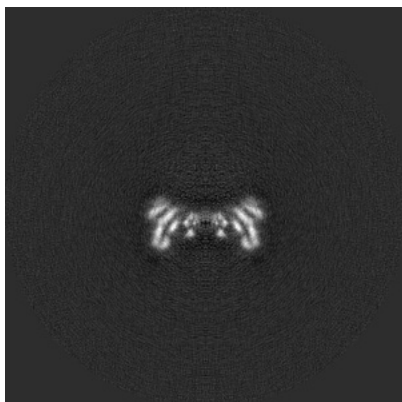


Y Index: 170

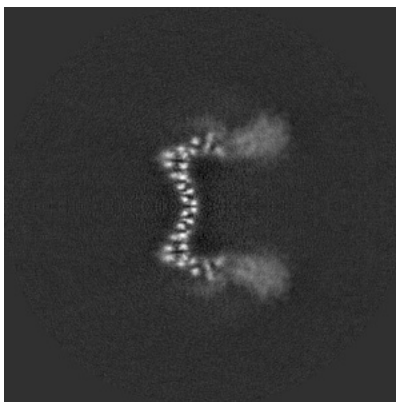


Z Index: 170

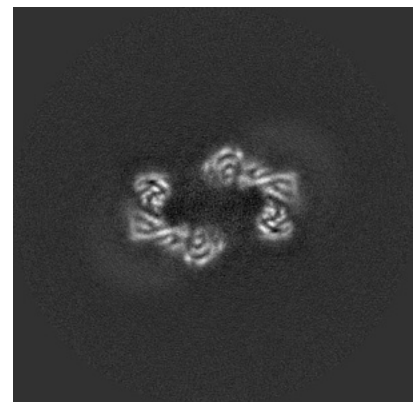
### 6.2.2 Raw map



X Index: 170



Y Index: 170

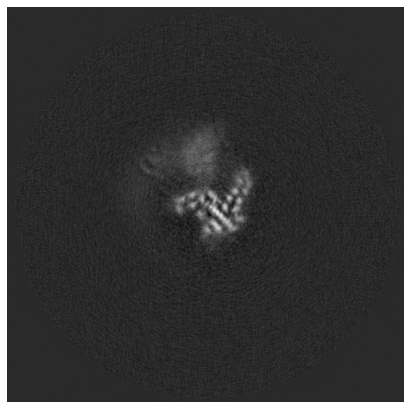


Z Index: 170

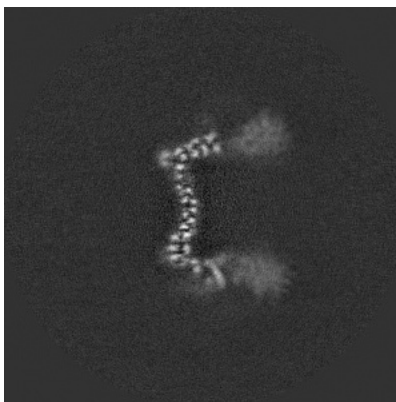
The images above show central slices of the map in three orthogonal directions.

## 6.3 Largest variance slices [i](#)

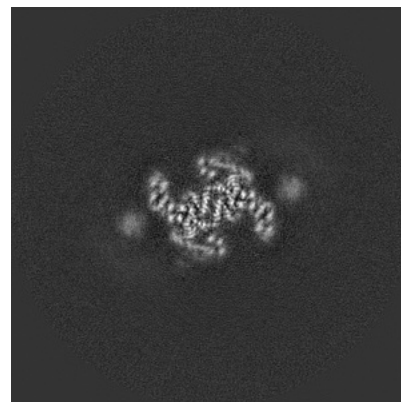
### 6.3.1 Primary map



X Index: 120

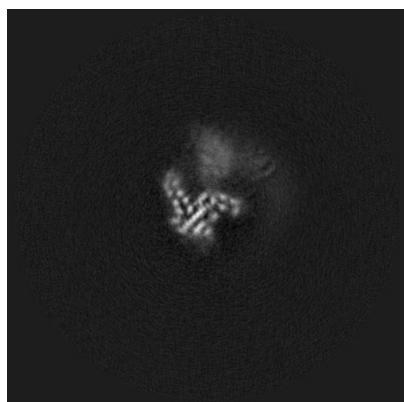


Y Index: 167

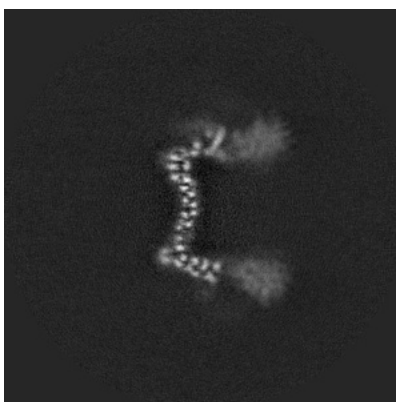


Z Index: 153

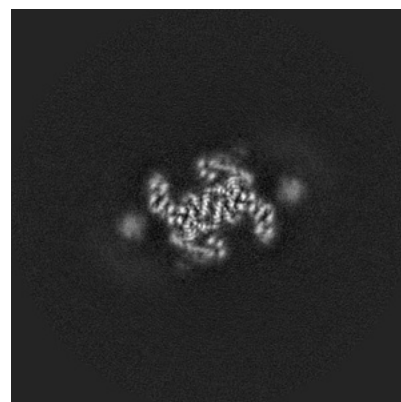
### 6.3.2 Raw map



X Index: 220



Y Index: 173

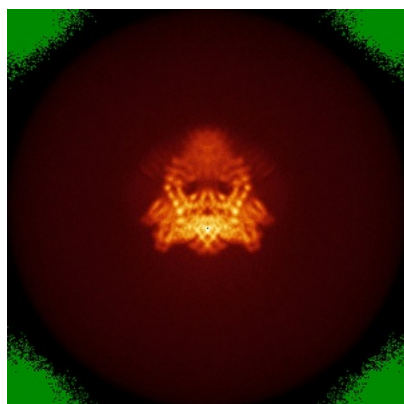


Z Index: 153

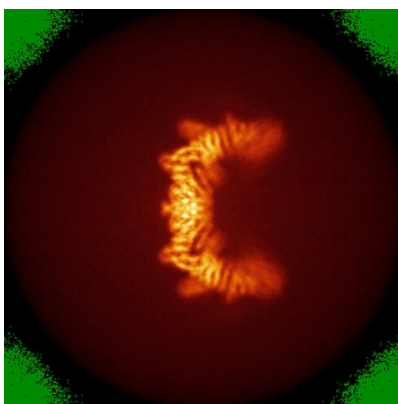
The images above show the largest variance slices of the map in three orthogonal directions.

## 6.4 Orthogonal standard-deviation projections (False-color) [i](#)

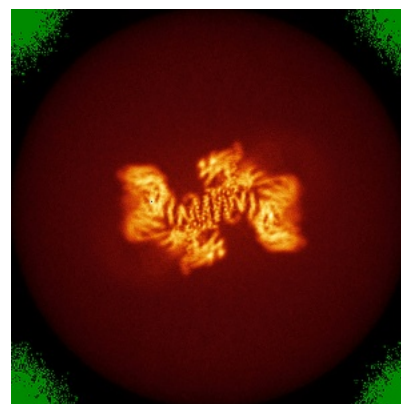
### 6.4.1 Primary map



X



Y



Z

### 6.4.2 Raw map



X



Y

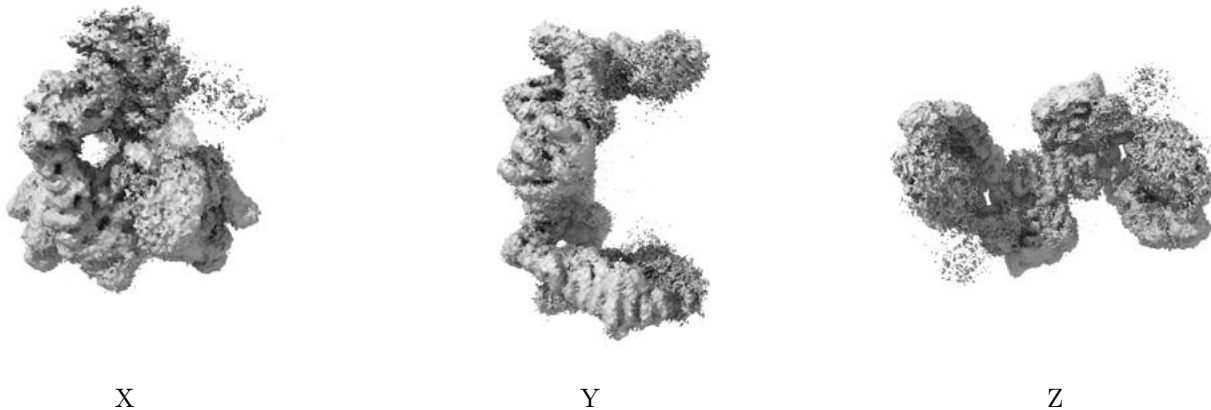


Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

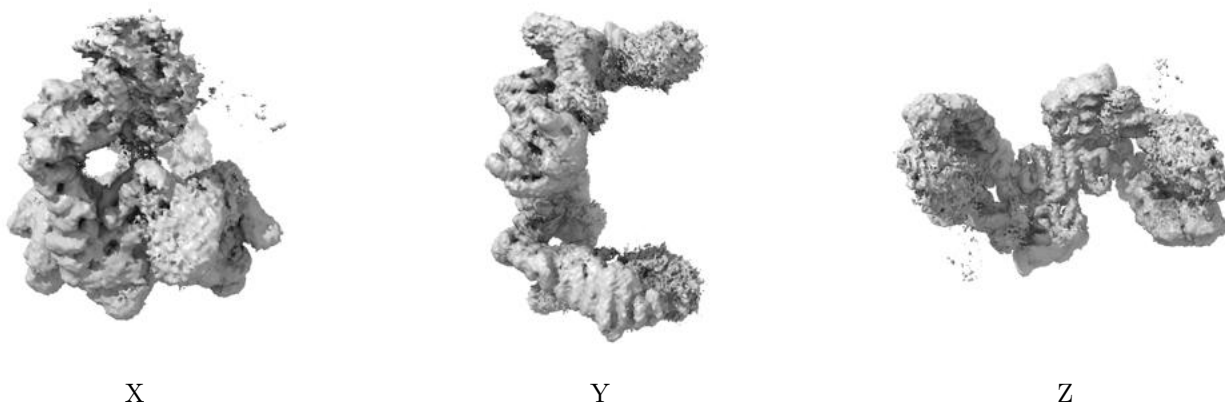
## 6.5 Orthogonal surface views [i](#)

### 6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.01. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

### 6.5.2 Raw map



These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

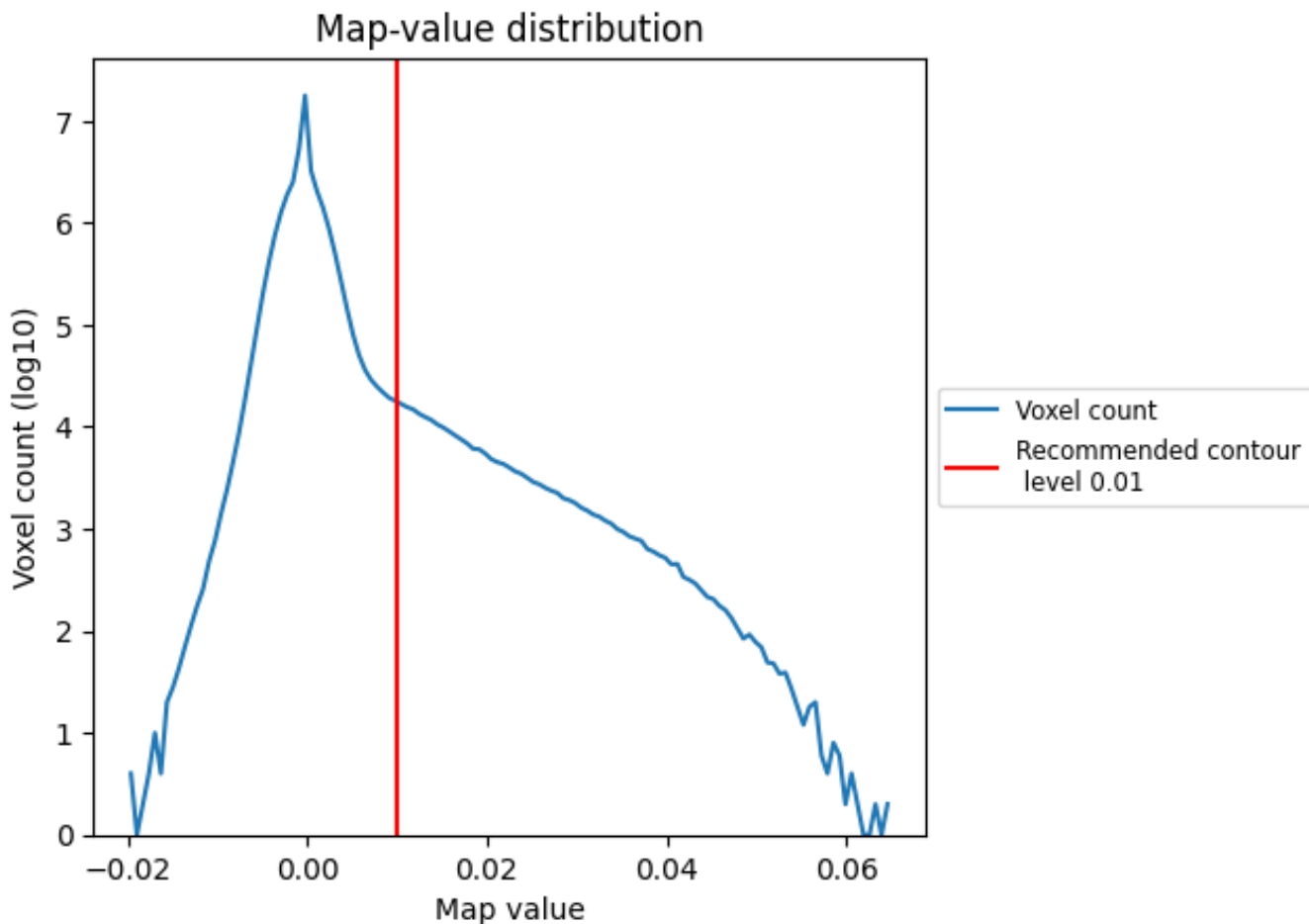
## 6.6 Mask visualisation [i](#)

This section was not generated. No masks/segmentation were deposited.

## 7 Map analysis [i](#)

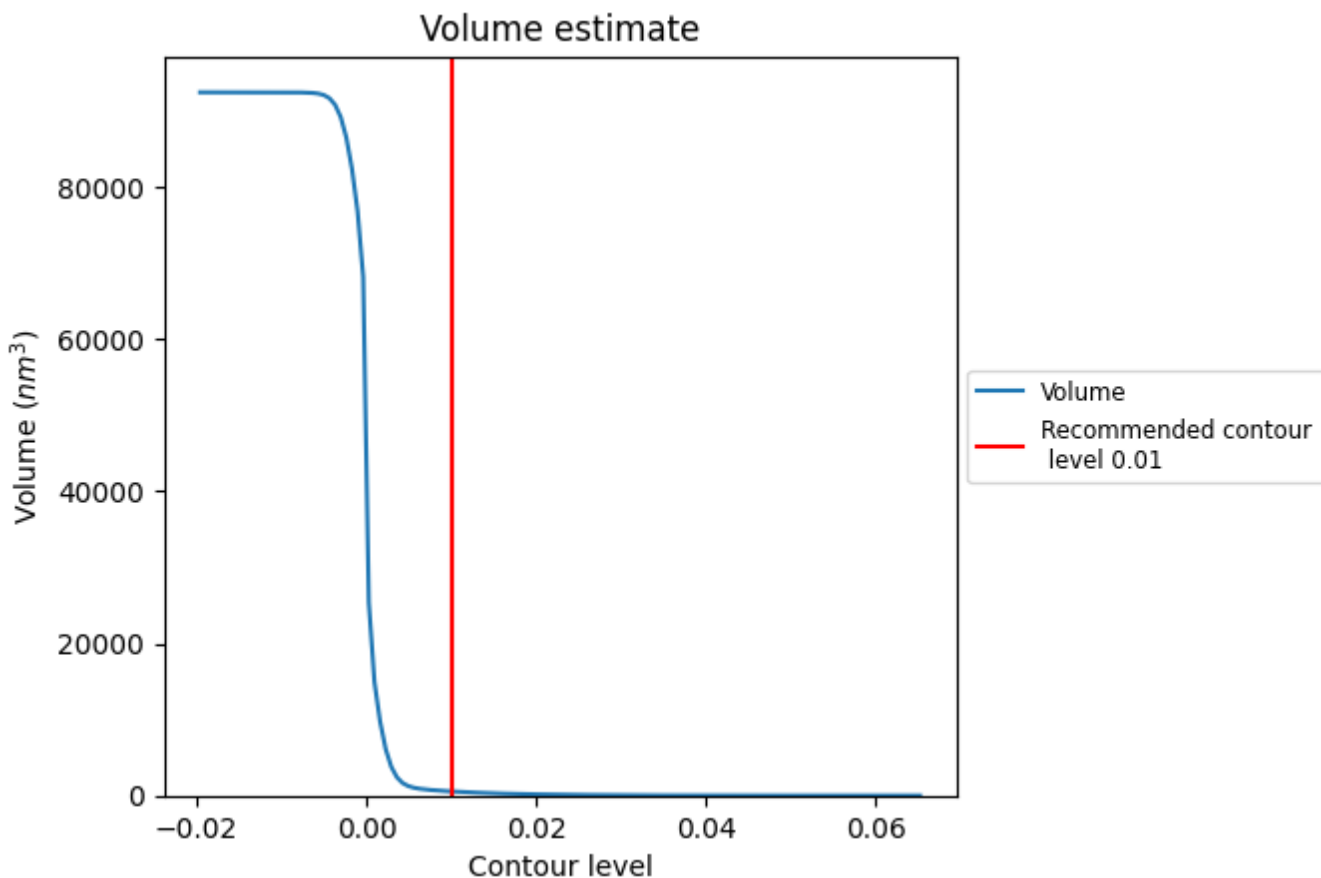
This section contains the results of statistical analysis of the map.

### 7.1 Map-value distribution [i](#)



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

## 7.2 Volume estimate [i](#)

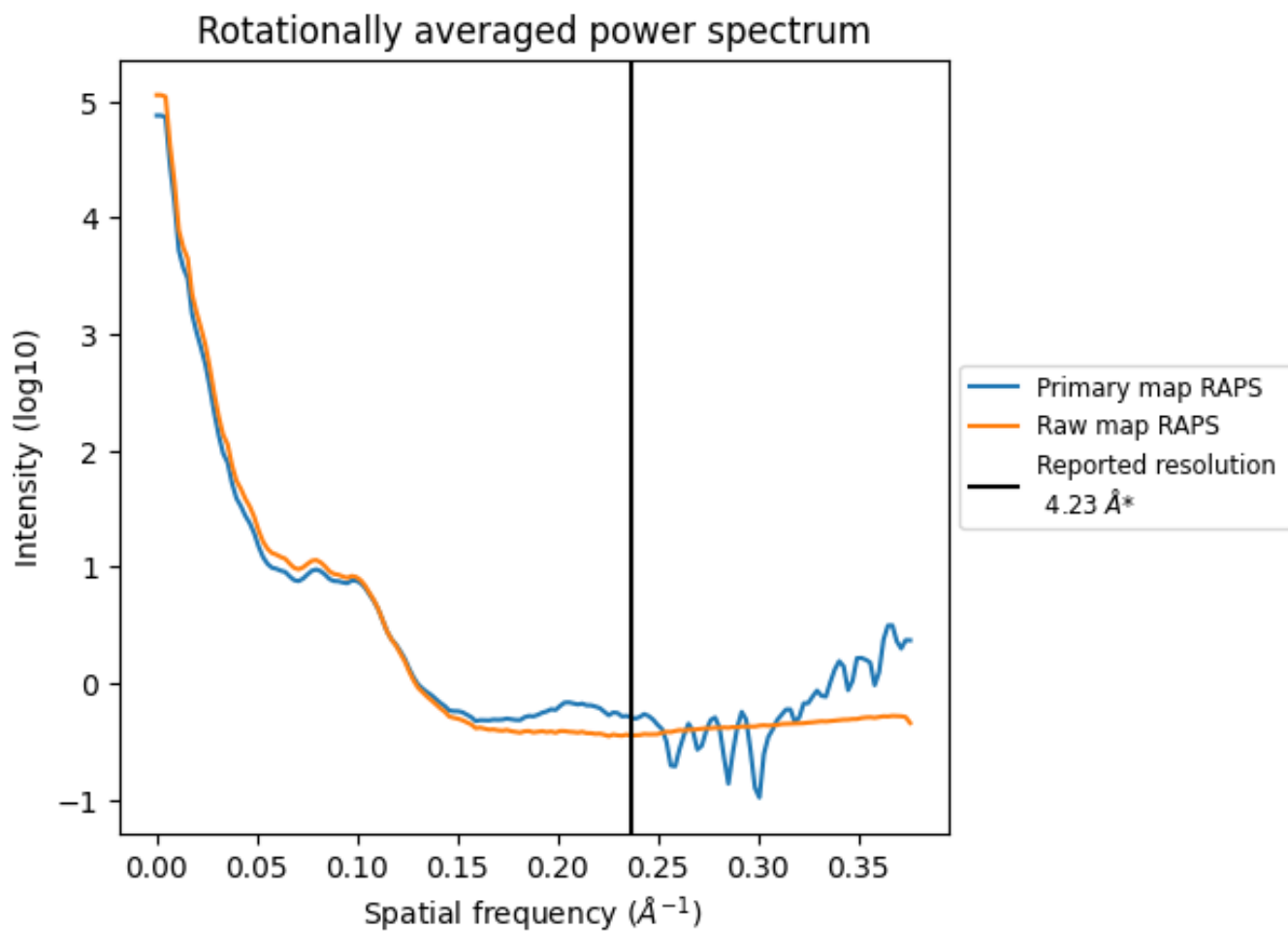


The volume at the recommended contour level is 546 nm<sup>3</sup>; this corresponds to an approximate mass of 494 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.



### 7.3 Rotationally averaged power spectrum i

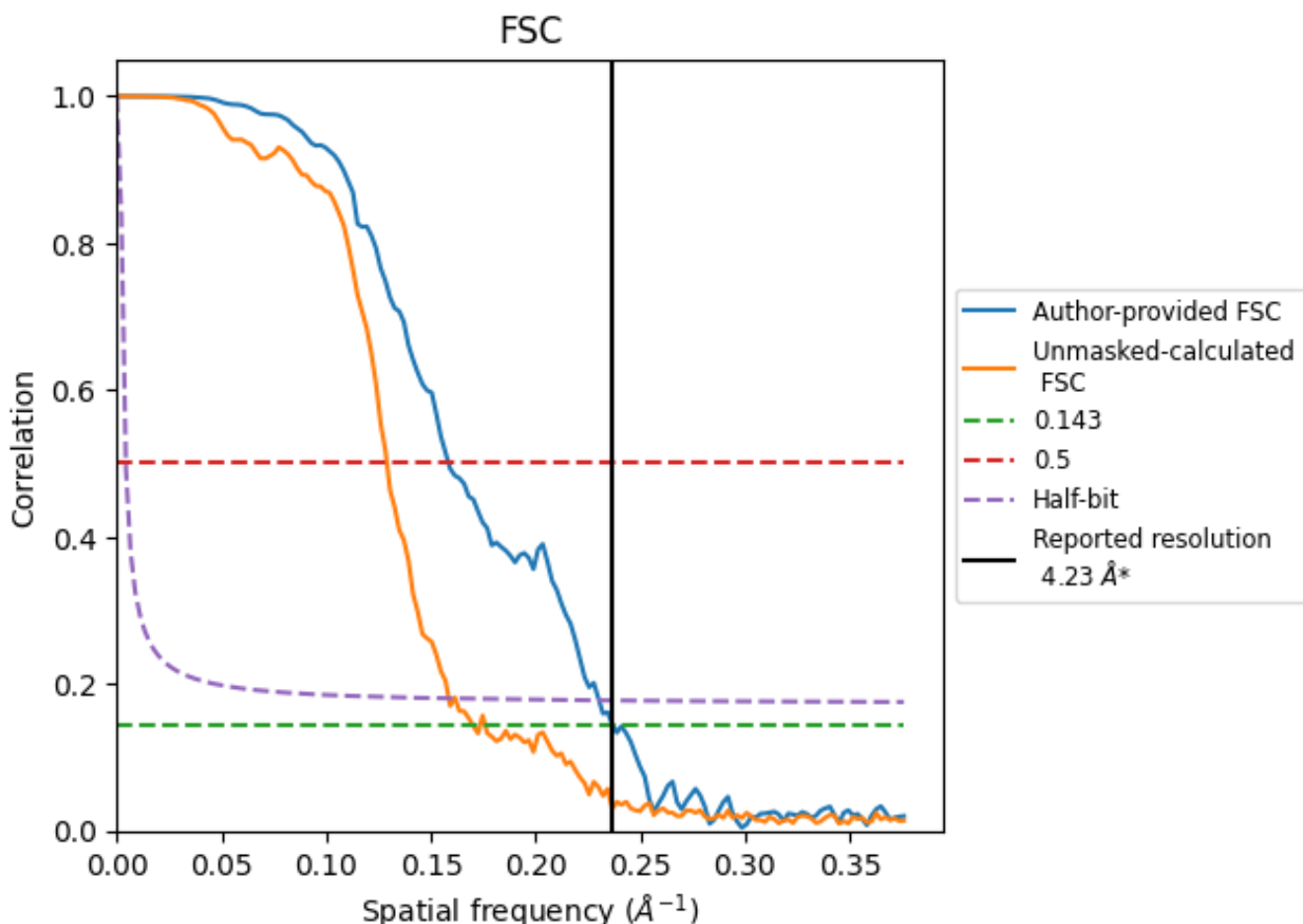


\*Reported resolution corresponds to spatial frequency of 0.236 Å<sup>-1</sup>

## 8 Fourier-Shell correlation [i](#)

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

### 8.1 FSC [i](#)



\*Reported resolution corresponds to spatial frequency of 0.236 Å<sup>-1</sup>

## 8.2 Resolution estimates [i](#)

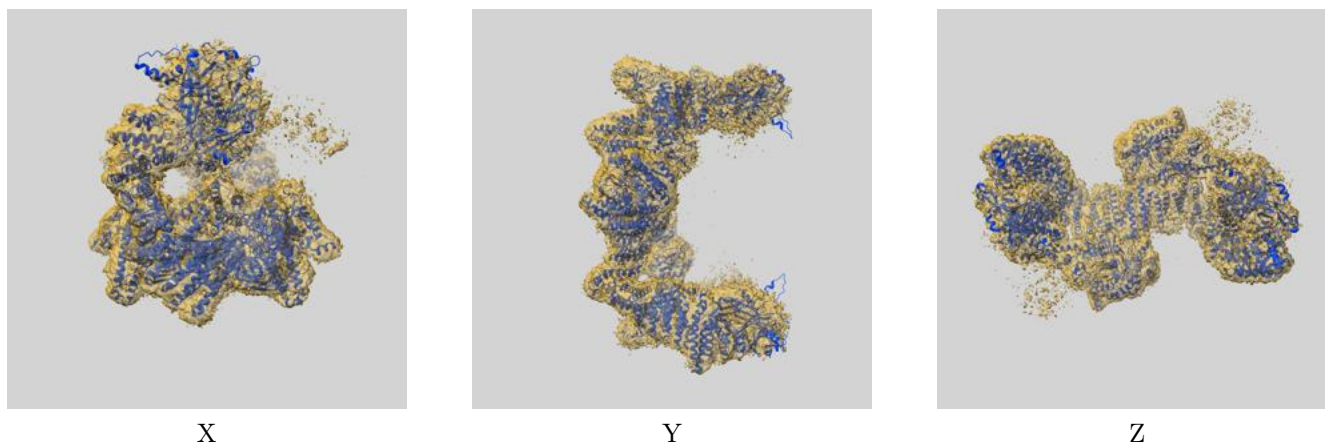
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	4.23	-	-
Author-provided FSC curve	4.22	6.31	4.34
Unmasked-calculated*	5.88	7.75	6.31

\*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 5.88 differs from the reported value 4.23 by more than 10 %

## 9 Map-model fit [i](#)

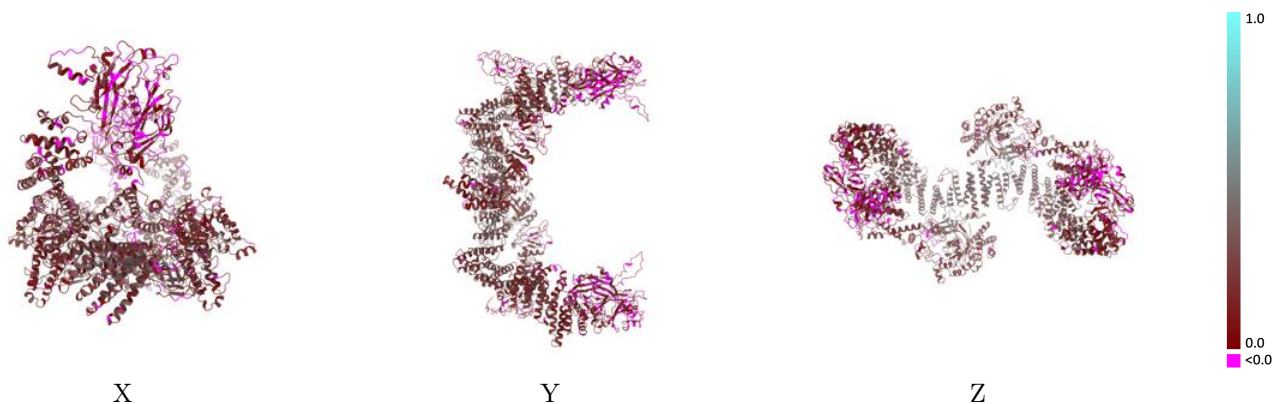
This section contains information regarding the fit between EMDB map EMD-60146 and PDB model 8ZJI. Per-residue inclusion information can be found in section 3 on page 5.

### 9.1 Map-model overlay [i](#)



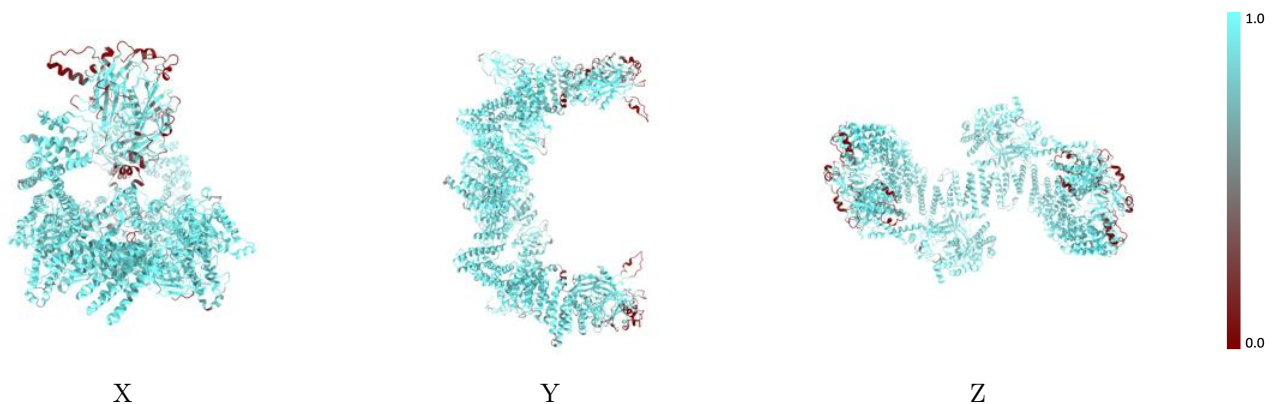
The images above show the 3D surface view of the map at the recommended contour level 0.01 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

## 9.2 Q-score mapped to coordinate model [i](#)



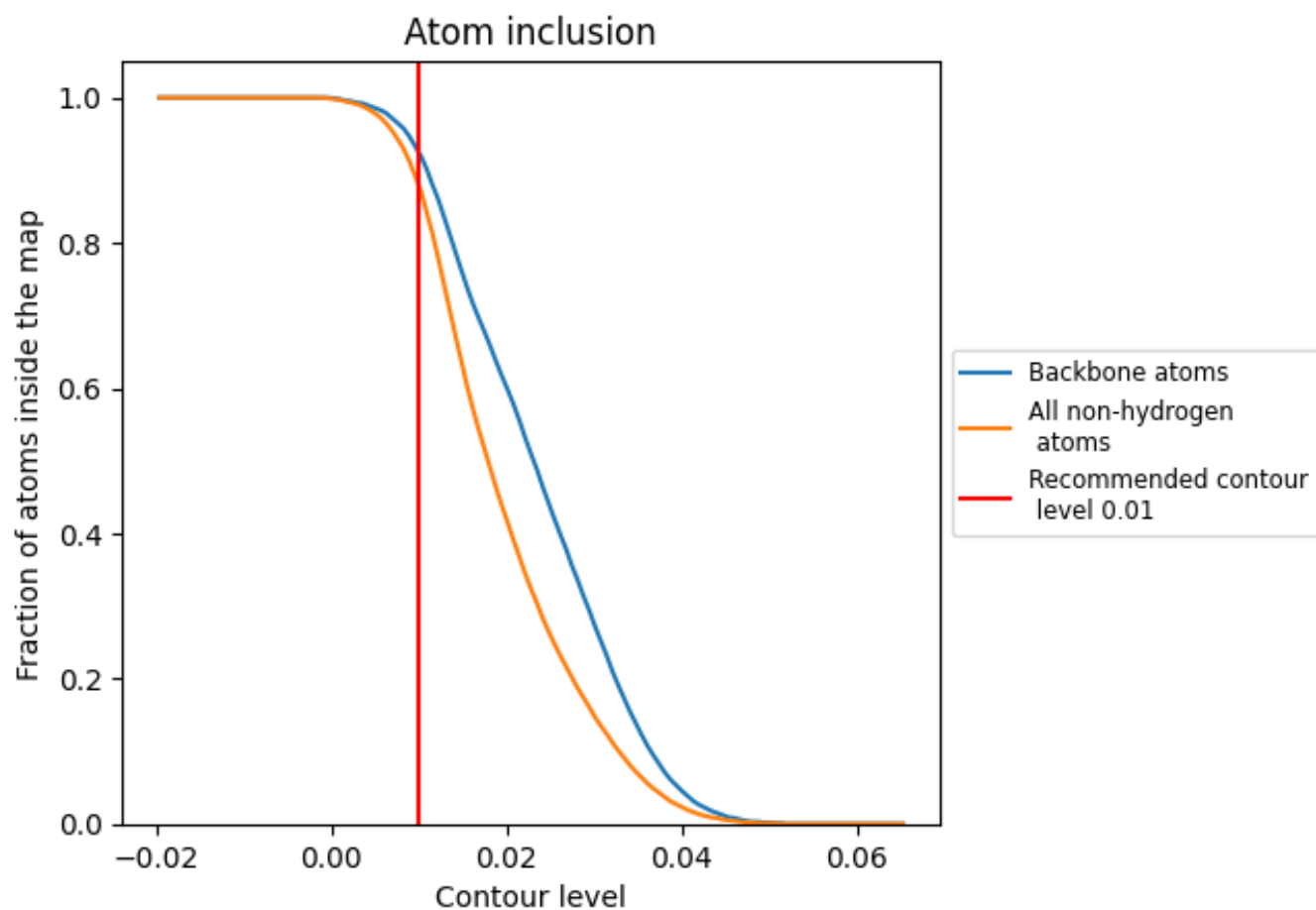
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

## 9.3 Atom inclusion mapped to coordinate model [i](#)



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.01).















## 9.4 Atom inclusion [i](#)



At the recommended contour level, 92% of all backbone atoms, 88% of all non-hydrogen atoms, are inside the map.

## 9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.01) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.8790	 0.1920
A	 0.9060	 0.1590
B	 0.8680	 0.1910
C	 0.9700	 0.2480
D	 0.9130	 0.1580
E	 0.8650	 0.1900
F	 0.9720	 0.2490

